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Filed:	4/12/04
180th day:	10/9/04
Staff:	K. Cuffe
Staff report:	5/26/04
Hearing date:	6/9/04

COASTAL DEVELOPMENT PERMIT APPLICATION

Application number.....**3-01-016, Moss Landing Harbor District – North Harbor Redevelopment Project**

Applicant.....**Moss Landing Harbor District (MLHD)**
c/o Linda McIntyre, General Manager

Agent .....Francis Houston, Land Systems Group

Project location .....Parcel located between Elkhorn Slough channel and Elkhorn Yacht Club in the North Harbor Area of Moss Landing Harbor, Moss Landing, Monterey County, with disposal of suitable dredge materials at approved beach renourishment or offshore location. Dredge materials unsuitable for beach or offshore disposal will be disposed of at a confined upland disposal site.

Project description.....The Moss Landing Harbor District (MLHD) proposes to redevelop the North Harbor area (APN 413-022-003) for public visitor serving and recreational uses. Portions of the project are located seaward of mean high tide and so within the Coastal Commission's jurisdiction, and portions are located landward of mean high tide and so in the jurisdiction of Monterey County Planning Department. Those portions located within the Coastal Commission's jurisdiction, and the subject of this staff report, include the following:

1) Demolition of the existing Maloney's Harbor Inn restaurant and other abandoned waterfront structures that extend into and over the harbor waters,

2) Installation of approximately 1,900 cy of riprap for shoreline protection under wharf, around boat ramp and between new and existing boat ramp.

3) Construction of new four lane concrete boat ramp (approximately 125 foot long, 90 feet wide, requiring 2,500 cy of dredging, 410 cy of concrete fill for ramp, 1,600 cy of fill under ramp, and 200 cy of riprap protection around ramp) with three floating docks (each 120 feet long, 10 feet wide, requiring 9 concrete or steel pilings);

4) Construction of a new 15,000 square foot public wharf (approximately

375 feet long, 24 to 40 feet wide, using a maximum of 175 24"-diameter concrete or steel pilings), with seating and pedestrian promenade for coastal trail,

5) North transient guest dock (one floating dock approximately 260 feet long, 12 feet wide, with 12 concrete or steel pilings);

6) South transient guest dock (one floating dock approximately 170 feet long, 12 feet wide, with 10 concrete or steel pilings).

7) At least 10-foot wide Coastal trail along seaward edge of wharf promenade.

The project requires approximately 5,000 cy of dredging of harbor sediments. Dredging will be conducted consistent with the approved protocol and requirements of the Harbor District's existing long-term maintenance dredging permit (CDP 3-01-049), including conducting sampling and dredge disposal site suitability analyses prior to dredging. Uncontaminated dredged materials will be disposed of either at the approved offshore aquatic discharge site (SF-12) located in Monterey Bay (if less than 80 percent sand sized sediments) or at the approved beach renourishment site located on Moss Landing Beach, south of the harbor entrance (if greater than 80 percent sand sized sediments). (This permit does not allow dredging of contaminated materials.)

Portions of the project located within the regulatory jurisdiction of the Monterey County Planning Department include the following: approximately 35-foot landward relocation of building pads for the Maloney's Harbor Inn Restaurant and Harbor District office/interpretive center/commercial building, paving and striping improvements for increased automobile and boat-trailer parking (increasing permanent public parking from approximately 226 car spaces to a total of 384 – including 142 car spaces and 121 car/trailer spaces, and adding approximately 70 temporary spaces within the Caltrans right-of-way), reducing the number of ingress/egress locations along Highway One from three different entrances to one main entrance, widening the main entrance and developing acceleration and deceleration lanes to/from Highway One, developing a bike trail along Highway One and a coastal trail segment along the existing shoreline (that will connect to the coastal trail segment across the wharf promenade to allow through coastal access across the parcel).

Approvals Received .....Monterey County Coastal Development Permit for portions of project in County permit jurisdiction and Design Approval for portions of the project in Coastal Commission original jurisdiction PLN020485 (3-MCO-04-094); Department of Boating and Waterways Grant for construction of boating

facilities (Contract Number 98-101-051 for Project Number 050); Coastal Commission CDP 3-01-049 (5-year permit for maintenance dredging; expires June, 2007).

File documents.....CCC Coastal Development Permit file 3-01-016.

Summary of Staff Recommendation:

The staff recommends that the Commission **approve, with conditions**, the proposed North Harbor Redevelopment Project. The proposed project includes demolition of existing visitor serving commercial structures, and landward relocation of building pads for future rebuild of the structures, in order to provide for continued use of these structures out of danger from coastal erosion and flooding. It involves protecting existing coastal-dependant facilities (existing parking lot and 2-lane boat ramp) that provide access for recreational boaters and general access to the harbor shoreline, and construction of new coastal dependant, public access and recreational boating facilities (new 4-lane boat launch, north and south transient guest docks, public wharf and coastal trail) for increased public use and access to the harbor shoreline and coastal waters.

Those portions of the North Harbor Redevelopment Project located within the Coastal Commission's jurisdiction, and thus the subject of this staff report, include the following:

1. **Demolition of Existing Structures.** Demolition of the existing Maloney's Harbor Inn restaurant and other abandoned waterfront structures that extend into and over the harbor waters, including removal of existing pilings to at least 2' below bottom surface.

2. **Riprap Shoreline Protection.** Installation of approximately 1,900 cy of riprap for shoreline protection along 1,000 linear feet of shoreline, to be placed under wharf, between the wharf and new 4-lane boat ramp, around the new boat ramp and north to the existing 2-lane boat ramp. Existing riprap located along the shoreline between Maloney's Harbor Inn and the Sea Harvest (formerly Skipper's) Restaurant will be removed and replaced with new, better quality material, and additional riprap will be placed along the upper slope to protect fill used to raise the existing grade of the site to the elevation of the new building pads (which are being raised to a minimum elevation of 5 feet NGVD in order to be located out of the 100-year flood elevation).

3. **New 4-lane Boat Launch.** Construction of a new four-lane concrete boat ramp (approximately 125 foot long by 90 feet wide, requiring 2,500 cy of dredging, 410 cy of concrete fill for ramp, 1,600 cy of fill under ramp, and 200 cy of riprap protection around ramp); with 3 floating docks (each 120 feet long by 10 feet wide, requiring 9 concrete or steel pilings). The new boat ramp will be funded by the California Department of Boating and Waterways and will supplement the existing 2-lane public boat ramp located just south of the Elkhorn Yacht Club. As proposed, the existing boat ramp will be dedicated to non-motorized vessel use (eg., kayaks and canoes), and the new 4-lane boat ramp will be dedicated for larger vessels on trailers, including motorized

recreational and sport fishing boats.

4. **Public Wharf and Pedestrian Promenade.** Construction of a new 15,000 square foot public wharf with seating and pedestrian promenade for coastal trail. The new wharf will be approximately 375 feet long, and from 24 to 40 feet wide, with a maximum of 175 24"-diameter concrete or steel pilings. Wharf decking will be wood, supported by a concrete, steel or wooden sub-structure that will connect the piles to each other for additional lateral support (similar in construction, and at the same elevation as the already completed wharf section located seaward of the rebuilt Skipper's – now Sea Harvest – Restaurant). The public wharf will extend from the southeastern end of the project area to the north transient dock gangway.

5. **North Transient Dock.** Construction of one floating dock (approximately 260 feet long by 12 feet wide with 12 concrete or steel pilings, and ADA accessible gangway) located between new boat launch area and Sea Harvest Restaurant, and to be used for guest berthing and overnight berthing of vessels visiting the harbor.

6. **South Transient dock.** Construction of one floating dock (approximately 170 feet long by 12 feet wide with 10 concrete or steel pilings, and ADA accessible gangway) located west of Highway One bridge along main Elkhorn Slough channel to provide guest berthing for deeper draft vessels.

7. **Coastal Trail.** A demarcated, ten-foot wide pedestrian access trail along the seaward extent of the public wharf.

8. **Dredging.** The project requires a total of approximately 5,000 cy of dredging of harbor bottom sediments, with approximately 2,500 cy dredged from both the boat ramp area and the north transient dock area (see Exhibit F). Dredging will be conducted consistent with the approved protocol and requirements of the Harbor District's existing long-term maintenance dredging permit currently in force (CDP 3-01-049), including conducting sampling and dredge disposal site suitability analyses prior to dredging. Uncontaminated dredged materials will be disposed of at the approved offshore aquatic discharge site (SF-12) located in Monterey Bay or at the approved beach renourishment site located on Moss Landing Beach, south of the harbor entrance (see Exhibit I).

Portions of the project located within the regulatory jurisdiction of the Monterey County Planning Department, and recently approved by the Planning Commission's Final Local Action Notice PLN 020485 (CDP 3-MCO-04-094, dated February 25, 2004) include the following:

1. Relocation of building pads for the Maloney's Harbor Inn Restaurant and adjacent abandoned building (to be rebuilt for use as an interpretive center/commercial building/harbor district office building) approximately 35 feet landward. (Future reconstruction of the buildings, and additional restroom facilities, will require a separate coastal development permit.)

2. Installation of public parking improvements for automobiles and boat-trailer parking (increasing permanent public parking from approximately 226 car spaces to a total of 384 – including 142 car spaces and 121 car/trailer spaces, and adding approximately 70 temporary spaces within the Caltrans right-of-way),

3. Reduction of the number of ingress/egress locations along Highway One from three different entrances to one main entrance,

4. Widening of the main entrance and developing acceleration and deceleration lanes to/from Highway One for safer access to the site.

5. Development of a Class I bike trail along Highway One (within the Highway One right-of-way).

6. Development of a coastal trail along the existing shoreline (which also extends from the main entrance at the northeastern end of the site, west to the shoreline, then south along the shoreline, where it crosses into the Coastal Commission's jurisdiction as it extends across the wharf promenade to the southeastern end of the site).

As approved by the County, parking lot improvements will include grading and paving of the existing parking lot, installation of adequate drainage to control onsite runoff and increasing the base elevation of the parking lot to decrease the onsite potential for flooding. As shown on the revised site plan (dated May 12, 2004), the project includes a boat wash-down station with a sand/grease interceptor, and four drain inlets, all of which drain to the harbor (see Exhibit F).

The project will provide new and expanded recreational boating facilities, which are considered a high priority under the Coastal Act. The project site has experience substantial erosion, and shoreline protection is necessary to protect the coastal dependent uses served by the site. The project proposes placing 1,900 cy of riprap revetment along the entire shoreline. Twenty percent of the riprap will be used to replace existing riprap along the southern project shoreline, where it will be located under the proposed public wharf, and so not affect public access or visual resources. However, 80 percent of the proposed riprap would be placed north of the public wharf, where it would occupy nearly 0.65 acres of public beach, and cover intertidal habitat. Therefore, the permit has been conditioned to minimize the impact of the shoreline protection by requiring that a sheetpile bulkhead and tidal steps (with handrails) be used north of the proposed new 4-lane boat ramp.

Sensitive marine resources found in the area include marine mammals and birds, clam beds, which are located in areas proposed for dredging and are the main food source of the endangered California sea otter, and eelgrass beds, which are located along the southern shoreline, near the main Elkhorn Slough channel. The project has thus been designed to minimize the amount of dredging required for the new boat ramp and guest docks, and has been conditioned to avoid shading of eelgrass beds, avoid damage to eelgrass beds by prohibiting access to these areas, and to mitigate for any potential adverse impacts the project may have.

Dredging of 5,000 cy will be conducted consistent with the approved protocol and requirements of the Harbor District's existing long-term maintenance dredging permit currently in force (CDP 3-01-049), including conducting sampling and dredge disposal site suitability analyses prior to dredging. Uncontaminated dredged materials will be disposed of at the approved offshore aquatic discharge site (SF-12) located in Monterey Bay or at the approved beach renourishment site located on Moss Landing Beach, south of the harbor entrance (see Exhibit I).

Surface water runoff will be collected on site, and will be discharged to coastal waters, therefore the project has been conditioned to provide adequate water quality controls either at the end-of the pipe, or, preferably at the pipe inlets.

Public access improvements provided by the project will serve recreational boaters and reduce demand for dock space in the South Harbor, which gives priority to commercial fisherman and research vessels, In order to maximize the public access opportunities at the site, the project has been conditioned to include tidal steps with handrails for access to the intertidal zone, to ensure that commercial use of the site retains public access opportunities on the wharf and guest dock space, and that coastal trail links are provided between the bike trail, shoreline trail and wharf promenade, to ensure that through coastal access is provided throughout the project site.

The project also involves the demolition of existing structures, relocation of the structures landward, in the County's permit jurisdiction, to get them out of the 100 year flood zone, with future rebuild requiring a separate coastal development permit. While the structures have been found to be historic and have historical significance to the area, they are severely deteriorated and have been found to be structurally unsound. Therefore, this permit allows for the demolition of these structures, and the County's approval of the building pad relocation has conditioned any future rebuild of these structures to be of similar scale, height, and visual character. Therefore, the project will serve to preserve and protect visual resources of this very scenic area.

Staff Report Contents

List of Tables

List of Exhibits

1. Staff Recommendation on Coastal Development Permit

The staff recommends that the Commission, after public hearing, **approve** the proposed project subject to the standard and special conditions below. Staff recommends a **YES** vote on the following motion:

> ***Motion:*** *I move that the Commission approve Coastal Development Permit Number 3-01-016 subject to the conditions below and that the Commission adopt the following resolution:*
>
> ***Approval with Conditions.*** *The Commission hereby grants a permit for the proposed development, as modified by the conditions below, on the grounds that the modified development is consistent with the requirements of Chapter 3 of the California Coastal Act of 1976 (Coastal Act), and will not prejudice the ability of the Monterey County to implement its certified local coastal program in conformance with Chapter 3 of the Coastal Act. The project is located between the sea and the first public road nearest the shoreline, is in conformance with the public access and recreation policies of the Coastal Act, and will not have any significant adverse effects on the environment within the meaning of the California Environmental Quality Act (CEQA).*

A yes vote would result in approval of the project as modified by the conditions below. The motion passes only by affirmative vote of a majority of the Commissioners present.

2. Conditions of Approval

A. Standard Conditions

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. **Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

B. Special Conditions

1. **Final Plans.** PRIOR TO ISSUANCE OF PERMIT, permittee shall submit final plans to the Executive Director for review and approval for the following

   a. **Final Site Plans.** Final plans shall show all components of project, including: extent of development area (i.e., extent of upland and marine construction activities), required project modifications as shown in Exhibit O, permanent benchmarks to be used to document and monitor conformance of as-built locations with approved plans, proposed dredge areas, all drainage outfalls, and topographic contours. Final plans shall show specific revisions as follows: riprap shall be limited to the areas shown on Exhibit O. A vinyl or steel sheetpile bulkhead north of the proposed new 4-lane boat launch, with the minimum amount of riprap necessary for toe protection and tidal steps with handrail shall be substituted for riprap at the northern portion of the project area, as shown on Exhibit O; wharf design shall be modified to avoid shading adjacent eelgrass beds; coastal trail shall connect to bike trail at both north and south ends of project site, as shown in Exhibit O.

   b. **Drainage Plans.** Revised drainage plan shall be submitted for Executive director review and approval showing either that filtration units shall be placed at the outboard end of each drainage discharging to the harbor or the drainage plan has been modified to incorporate a water quality filtration system that not only removes sediments, oil and grease, but also removes pollutants of concern (heavy metals, hydrocarbons and detergents) prior to discharge into harbor waters.

   c. **Structural Plans.** Project structures shall be designed and constructed in accordance with the recommendations of the geotechnical engineer, as identified in geotechnical reports prepared by Haro Kasunich and Associates (Geotechnical and Coastal Engineering Study for shorefront improvements, Moss Landing Harbor, Moss Landing, California, June 1998), and mitigation measures identified in the Initial Study and Mitigated Negative Declaration (approved by the Moss Landing Harbor District April 3, 2000), and the Environmental Assessment/Finding of No Significant Impact – Initial Study/Mitigated Negative Declaration (EA/FONSI, dated February 25, 2002). The recommended design specifications for stability from scour, waves, overtopping, seismic events, liquefaction, lateral spreading and other identified hazards shall be incorporated into the construction plans for the project. The new riprap shoreline protection shall be no further seaward that the location identified on the revised site plan and cross sections (shown on sheets C1 and C2, included in Exhibit F) prepared for the project by Moffatt & Nichol (dated May 12, 2004), as modified by Special Condition 1(a). Any modifications from these preliminary plans shall be clearly identified on the final plans; all modifications shall be compared against the preliminary plans for environmental impacts and supported by detailed engineering calculations. Any modifications to final approved plans shall require either a permit amendment or written approval by the Executive Director (see Special Condition 15).

   d. **Dredging Plans.** Dredge plans shall include a Dredge Episode Sediment Sampling and Analysis Plan and a Dredge Episode Operation Plan, consistent with long-term maintenance dredging

permit 3-01-049 currently in force. The Sediment Sampling and Analysis Plan (SAP) shall outline and label all areas to be dredged for this project, the existing bathymetry, sediment sampling locations, testing protocols to be used, and the proposed core and dredge depth for each proposed dredge area. The dredge episode operation plan (DOP) shall outline and label all areas to be dredged for this project, clearly define the permitted dredge depth and over-dredge depth, note the approximate volume to be dredged in each area, and classify the sediments according to the appropriate discharge site (i.e., unconfined aquatic disposal or beach replenishment) based on sediment sampling results and suitability determination (to be made by US Corps of Engineers and US EPA), detail the dredge and discharge schedule and detail the discharge pipeline layout to be used. This permit does not allow dredging of contaminated materials.

e. **Lighting Plans.** The lighting plan shall indicate the location, type, and wattage of all light fixtures and include catalog sheets for each fixture. All exterior lighting, other than that required by the US Coast Guard for navigational use and safety, shall be designed and located so that only the intended area is illuminated and off-site glare is prevented. Proposed lighting shall be indicated on site plans and shall be directed downward to prevent glare on adjacent and surrounding areas. Lights shall have solid sides and reflectors to further reduce lighting impacts.

f. **Railing Plans.** Plans shall show proposed railings to be used on public wharf. Railings shall be designed to maximize views (e.g., using vertical railings spaced sufficiently apart) to allow views of harbor, ocean and dunes across wharf while maintaining pedestrian safety.

g. **Signage Plans.** Plans shall identify the location, design and content of any signs and interpretive displays used for illustrative, educational or directional purposes. Signs should be kept relatively small in size, designed in keeping with the maritime character of the area, and placed in locations that avoid disruption of scenic coastal views. Signs should clearly identify that public coastal access is available, and what fees if any are required for public use of boat ramp areas and public parking spaces.

h. **Long-Term Pollution Prevention Plan.** Permittee shall develop a long-term pollution prevention program designed to prevent future adverse water quality impacts from ongoing activities associated with use of the site. The plan shall include provisions to provide water quality protection training to all personnel involved in construction, and ongoing maintenance and operations on site. The plan shall indicate that stormwater runoff from pervious and impervious surfaces shall be directed into stormwater inlets where pollutants of concern (hydrocarbons, detergents, oils and heavy metals) can be filtered and sediment trapped prior to runoff entering harbor waters. Permittee will be responsible for implementing the long-term pollution prevention plan following approval of the plan by the Executive Director.

2. **Dredging Operations.** This permit allows one-time dredging of up to 5,000 cy of harbor bottom sediment from the two dredge areas shown in the approved final plans. Dredging operations shall be conducted consistent with the long-term maintenance dredging permit currently in force (currently CDP 3-01-049), including sediment sampling, testing, and site suitability determinations

for appropriate dredge disposal location(s). The dredging permit currently in force does not allow dredging of contaminated sediment because an approvable upland rehandling site has not yet been developed or identified by the permittee. Thus, pursuant to CDP 3-01-049, a separate permit will be required prior to dredging any material found unsuitable for unconfined aquatic disposal or beach nourishment. Maximum annual dredging volumes and discharge are not to exceed annual volumes and discharge authorized by the long-term dredging permit currently in force.

3. **Future Maintenance Dredging.** This permit does not authorize future maintenance dredging. Any future maintenance dredging of the two dredge areas allowed under this permit will require the incorporation of these dredge areas into an authorized dredge area map, as part of a separate permit; preferably incorporated into an overall long-term maintenance dredging permit for the entire North Harbor. Any applications for future maintenance dredging shall include a sediment sampling and analysis plan and dredge operation plan consistent with the requirements of CDP 3-01-049.

4. **Geotechnical Review.** The project geotechnical engineer shall review all construction plans to ensure that geotechnical recommendations have been adequately incorporated in construction notes and plans. Evidence of the Geotechnical engineers review and approval of the plans shall be submitted to the Executive Director. At least once a month, the geotechnical engineer shall conduct an inspection during construction to ensure effective implementation of geotechnical recommendations.

5. **Construction Operations Plan.** PRIOR TO COMMENCEMENT OF CONSTRUCTION, permittee shall submit for Executive Director review and approval, a Construction Operations Plan that specifies measures to be implemented during construction to avoid impacts to adjacent habitats, recreation areas, and water quality. Following review and approval of the plan by the Executive Director, permittee shall be responsible for implementing all elements of the approved plan. Such plan shall include the following:

    a. **Construction Area.** Plans shall identify the location of the entire construction area, including equipment storage and staging locations and construction access routes. The construction area shall be limited to the minimum area needed to construct the project, and shall be delineated with temporary construction fencing. The construction area shall minimize the use of any sandy beach and show that no construction materials, heavy equipment, construction activities or personnel will be allowed in environmentally sensitive eelgrass or mudflat areas. Prior to any construction activity, the permittee shall install temporary construction fencing along the limits of the construction area to prevent any construction activity from encroaching into adjacent aquatic habitat. The fencing shall be at least 6 feet in height, shall be securely staked and shall be maintained in good condition during the entire construction phase of the project.

    b. **Erosion Control Plan.** The plan shall identify all relevant best management practices (BMPs) to be implemented during construction to control erosion associated with construction activities. Erosion control plan shall also include provisions for stockpiling

and covering of stored materials, temporary stormwater detention facilities, and shall prohibit grading and earthmoving during the rainy season (i.e., between October 15 and April 15) unless approved by the Executive Director. Erosion control plans shall contain provisions for specifically identifying and protecting all adjacent mudflats and aquatic habitat areas (with sandbag barriers, filter fabric fences, straw bale filters, etc.) from project-related runoff and sediment.

The Erosion Control Plan should make it clear that: (a) dry cleanup methods are preferred whenever possible and that if water cleanup is necessary, all runoff will be collected to settle out sediments prior to discharge from the site; (b) off-site equipment wash areas are preferred whenever possible; if equipment must be washed on-site, the use of soaps, solvents, degreasers, or steam cleaning equipment should not be allowed; in any event, this wash water should not be allowed to enter storm drains or any natural drainage; (c) concrete rinsates, if any, should be collected and they should not be allowed into storm drains or natural drainage areas; (d) good construction housekeeping should be required (e.g., clean up all leaks, drips, and other spills immediately; refuel vehicles and heavy equipment off-site and/or in one designated location; keep materials covered and out of the rain (including covering exposed piles of materials used in the treatment process and wastes); dispose of all wastes properly, place trash receptacles on site for that purpose, and cover open trash receptacles during wet weather); and finally (e) all erosion and sediment controls should be in place prior to the commencement of grading and/or construction as well as at the end of each day.

c. Hazardous Material Storage. Store petroleum products and other hazardous materials a distance of at least 20 meters (65 feet) from the shoreline and construct a berm around the storage site sufficiently high to retain 1.5 times the amount of stored liquids. The fueling of all vehicles and construction equipment shall occur off site.

d. Spill Response Plan. The Construction Operations Plan shall include a spill response plan or evidence that the applicant has contracted with a qualified local spill containment/cleanup contractor capable of responding to accidental releases of petroleum or other hazardous material.

e. Foreign Material Containment. Measures shall be implemented to prevent foreign materials (e.g. construction scraps, wood preservatives, other chemicals, etc.) from entering the harbor or other state waters. A floating containment boom, netting, or functional equivalent shall be placed around all active portions of a construction site where wood scraps or other floatable debris could enter the water. For any work on or beneath fixed decking, heavy-duty mesh containment netting shall be maintained below all work areas where construction discards or other materials could fall into the water. The floating boom and net shall be cleared daily or as often as necessary to prevent accumulation of debris. Contractors shall insure that work crews are briefed on the importance of observing the appropriate precautions, implementing these measures, and

reporting any accidental spills. Construction contracts shall contain penalty provisions, sufficient to provide for the retrieval and/or clean up of improperly contained foreign materials. No construction activities or material storage shall be allowed north of the Elkhorn Yacht Club without prior Executive Director review and approval.

f. Procedures for Concrete Work. For piling installation that requires the pouring of concrete in, adjacent to, or over the water, one of the following methods shall be employed to prevent uncured concrete from entering harbor or other state waters:

1. Complete dewatering of the pour site, within a coffer dam or other barrier; the site is to remain dewatered until the concrete is sufficiently cured to prevent any significant increase in the pH of adjacent waters; or

2. The tremie method, which involves placement of the form in water, inserting a plastic pipe down to the bottom of the form and pumping concrete into the form so that the water is displaced towards the top of the form. If this method is selected, the displaced waters shall be pumped off and collected in a holding tank. The collected waters shall then be tested for pH, in accordance with Fish & Game regulations. If the pH is greater than 8.5, the water will be neutralized with sulfuric acid until the pH is between 8.5 and 6.5. This pH-balanced water can then be returned to the sea. However, any solids that settle out during the pH balancing process shall not be discharged to the marine environment.

In each case involving such concrete pours in or near state waters, a separate washout area shall be provided for the concrete trucks and/or tools. The washout area shall be designed and located so that there will be no chance of concrete slurry or contaminated water runoff to the harbor other state waters, nor into storm drains or gutters that empty into such bodies of water.

g. Minimize interference with Public Access. Permittee shall also ensure that construction and demolition operations are conducted so as to minimize any interference with public access to the shoreline within and adjacent to the project site. Construction shall be scheduled so that portions of the shoreline, parking, and existing commercial visitor serving facilities remain available to the public throughout project construction.

h. Construction Cleanup. Construction Operation Plans shall also show that within 30 days of conclusion of construction activities, all construction materials shall be removed.

i. Environmental and Condition Compliance Monitor. Permittee shall employ an environmental monitor who is approved by the Executive Director to ensure compliance with all mitigation requirements and resource protection measures during the life of the project construction and clean-up activities. The monitor shall have the authority to halt any action that might result in injury or mortality to southern sea otters, harbor seals, brown pelicans, or other sensitive wildlife or habitat, and shall inform construction

workers that construction vehicles and work activities shall avoid sensitive mudflat and aquatic habitat areas outside of the defined project area. Monitor shall also have the authority to utilize methods to delay in-water activities if marine mammals or sensitive bird species are within the immediate vicinity of construction. The environmental monitor shall consult with CDFG and USFWS for allowable methods to haze animals away from the work site (may possibly include using his/her physical presence, herding boards, hand clapping, or water hoses to encourage sea otters and harbor seals to leave any area where they may be at risk from project activities, however, the use of "seal bombs" is prohibited per Moss Landing Harbor District Ordinance Code § 14.110(6)).

6. Monitoring and Reporting Requirements.

A. Confirmation of Construction in Conformance with Approved Plans. Within 60 days of completion of construction, permittee shall submit a letter report to the Executive Director that includes:

i. As-built plans and engineer's certification that the project has been constructed in substantial conformance with the preliminary design drawings prepared by Moffatt & Nichol Engineers, dated May 12, 2004, as modified by Special Condition 1(a), and approved by this permit.

ii. Geotechnical or civil engineer's certification that the project has been constructed in substantial conformance with preliminary recommendations for protection from seismic damage, lateral spreading, scour, liquefaction and the consequences of overtopping and all other preliminary recommendations provided in geotechnical engineering report provided for the project, prepared by Haro, Kasunich and Associates, dated June 1998.

iii. Photo-documentation of markers and signage used to prevent boat access in areas of eelgrass beds, and resource protection measures implemented as part of the construction process and of completed facilities. Eelgrass bed markers shall be located at least 10 feet outboard of the outer edges of eelgrass beds.

iv. Environmental monitoring report confirming that all resource protection measures were implemented in conformance with conditions of this permit, describing measures taken during any interactions with sensitive wildlife and habitat, and describing any additional mitigation measures taken to avoid impacts to eelgrass beds and clam beds.

B. Eelgrass Monitoring. PRIOR TO ISSUANCE OF PERMIT, he applicant shall submit, for Executive Director review and approval, an eelgrass monitoring and mitigation plan that provides:

i. A qualified biologist shall monitor the location and extent of eelgrass beds adjacent to the project by conducting annual surveys, to be submitted to the Executive Director by January 1st of each year, that also include an evaluation of the cause of any identified reduction in eelgrass habitat.

ii. If monitoring finds that 10% or more of the eelgrass beds have been adversely affected by the project, permittee shall develop and implement a plan, subject to Executive Director review and approval, that provides for corrective mitigation measures. Mitigation measures may include pilot project for planting of eelgrass beds in new location within the North Harbor area or within Elkhorn Slough, in coordination with ESNER or MLML research and educational activities.

iii. If monitoring indicates that boat use of the area is having adverse impacts on the eelgrass beds, permittee shall develop and implement a plan, subject to Executive Director review and approval, that will prevent further impacts. Such plan could include the construction of permanent physical barriers to prohibit all boat entry into the area between the south transient guest dock and the shoreline.

7. **Protection of Sensitive Habitats.** PRIOR TO COMMENCEMENT OF WORK WITHIN 100 FEET OF SENSITIVE EELGRASS (as shown in Exhibit F) OR CLAM BED HABITATS, the permittee shall submit evidence to the Executive Director for review and approval that the following have occurred:

   a. A qualified biologist shall survey the project construction site including all required dredge locations prior to dredging of the area; and

   b. A qualified biologist shall mark areas of eelgrass and clam beds to be protected prior to initiation of work by installation of buoys and floating booms.

   c. If clam beds are located within any of the project construction or dredge areas, the applicant shall submit a mitigation plan to address removal and relocation of the clams and other benthic macrofauna found in these areas to other areas of the north harbor area.

   d. No other project activities shall occur in these areas, which will be monitored by the environmental monitor (see Special Condition 5i).

8. **Snowy Plover Protection.** NO MORE THAN TWO WEEKS PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES, a survey shall be conducted on and within 500 feet of the project site by a qualified ornithologist according to the survey protocol of the USFWS, to determine whether nesting bird species and/or sensitive bird species, including bank swallows and western snowy plovers, are present at the site. If nesting and/or sensitive bird species are not observed, no further action is required. If nesting and/or sensitive bird species are observed, a qualified biologist shall prepare a mitigation plan in consultation with USFWS, for Executive Director Review and approval prior to commencement of construction. The mitigation plan shall at a minimum contain the following elements:

   a. Identification of the type and location of nests, roosting and foraging areas.

   b. Description of mitigation measures that will be implemented to avoid project impacts to the species (which shall include postponement of construction until outside the breeding

season); providing protective fencing around plover nests, maintaining a minimum distance of 100 feet from habitat areas, and/or prohibiting particular construction activities that would adversely affect the species.

Permittee shall be responsible for implementing the snowy plover mitigation plan following approval by the Executive Director.

9. **Archaeological Mitigation.** Should archaeological resources (as they are defined in section 21083.2(g) of CEQA) be discovered at the project site during any phase of construction, the permittee shall stop work until a mitigation plan, prepared by a qualified professional archaeologist and using accepted scientific techniques, is completed and implemented. Prior to implementation, the mitigation plan shall be submitted for review and approval by the State Historical Preservation Office and for review and approval by the Executive Director of the Commission. The plan shall provide for reasonable mitigation of the archaeological impacts resulting from the development of the site, and shall be fully implemented. A report verifying compliance with this condition shall be submitted to the Executive Director for review and approval, upon completion of the approved mitigation.

10. **Public Access.** Permittee shall ensure public access components are constructed in substantial conformance with the approved final plans, and all facilities are open to the public concurrent with the opening of the parking lot and boat ramp for public use. Additionally:

    a. Wharf. Any commercial use of wharf deck space (for restaurant seating, retail displays, special events, etc) shall take up no more than half the width of the wharf decking, and shall ensure that at least half of the wharf area closest to the water remains open and available 24 hours a day, 365 days a year for through pedestrian access and general public use.

    b. Southern Connection of Pedestrian Trail to Bicycle Trail. Permittee shall submit, for Executive Director review and approval, plans to connect the pedestrian trail at the south end of the public wharf, by a ramp or stairway, to the bicycle route located along Highway One, in order to provide through public access of the coastal trail across the site. The approved connection shall be constructed and opened for public use concurrent with the opening of the parking lot and boat ramp for public use.

    c. Public Boat Ramp and Guest Dock Use. As required by the Department of Boating and Waterways Small Craft Launching Facility Grant (Contract 98-101-051), the Harbor District or any lessee or concessionaire operating under the authority of the Harbor District, shall not charge a total fee in excess of $3.00 for both the launching and retrieval of boats within the project area. Any annual adjustment or changes in fees must be consistent with provisions of Contract 98-101-051, and shall be submitted to the Executive Director. Public parking, boat ramp and guest dock use shall be available to the general public for general use and recreational boating, as well as to commercial

marine charter, sport fishing, and research or university uses on a first-come, first-served basis.

11. **Coordination with County Permits.** The landward portion of this project falls within an area where the coastal permit jurisdiction has been delegated to the County of Monterey. Permittee is responsible for conformance with the County approval (DA990182, Monterey County Planning Commission, 6/30/99) and any amendments thereto, and for obtaining any other necessary permits or other approvals as may be required under such delegated authority, directly from the County.

12. **Other Agency Review and Approval.** PRIOR TO ISSUANCE OF PERMIT, the permittee shall submit to the Executive Director evidence of project approval, or a statement that no review or approval is required from the following agencies:

    a. **CDFG Review.** Permittee shall provide evidence that the California Department of Fish and Game (CDF&G) has reviewed the project for potential impacts to marine mammals, invertebrates, and seabirds in the area, or an indication that no review is required.

    b. **MBNMS Review and Approval.** Permittee shall submit to the Executive Director evidence that the Monterey Bay National Marine Sanctuary (MBNMS) has reviewed the project for potential impacts to resources or waters of the Monterey Bay National Marine Sanctuary, or an indication that no review is required.

    c. **Regional Water Quality Control Board.** Permittee shall submit to the Executive Director for review evidence of Regional Water Quality Control Board (RWQCB) approval of the project, or an indication that such approval is not required. All materials and construction, including installation of new pilings, shall be in accordance with RWQCB recommendations for the protection of water quality and according to the method that results in the least disturbance of bottom sediments.

    d. **Conformance with USACOE Requirements.** Permittee shall submit to the Executive Director for review a copy of any USACOE permit issued for this project, letter of permission or evidence that no Corps permit is necessary and concurrence by the USEPA for site suitability determination for disposal of dredge materials.

    e. **NOAA Fisheries.** Permittee shall submit to the Executive Director evidence of review by NOAA Fisheries, and any recommendations made, regarding potential project impacts to essential fish habitat in the harbor.

    f. **Conformance with NOAA and U.S. Coast Guard Regarding Navigational Requirements.** Permittee shall submit to the Executive Director for review and approval, evidence of compliance with the requirements of other agencies having jurisdiction over navigational requirements.

        i. **National Oceanic and Atmospheric Administration:** The applicant shall

provide the NOAA Office of Coast Surveys with contact information, final project blueprints, and a geographic description or gps location of the new wharf, transient docks, and boat ramp to update any nautical charts that include this area.

ii. **United Stated Coast Guard:** The applicant shall provide evidence of approval by the U.S. Coast Guard, or evidence that no such approval is necessary.

g. Monterey County Environmental Health: Evidence that the dredge program has been reviewed and approved by the Monterey County Environmental Health Division, Hazardous Materials Branch.

h. Monterey Bay Unified Air Pollution Control District: Evidence of compliance with all conditions of the MBUAPCD. Such conditions shall be submitted for the Commission file. Any limitations on hours of the dredge program shall be indicated.

13. Riprap Monitoring and Maintenance. PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall develop a plan for the review and approval of the Executive Director, for long-term monitoring and maintenance of the riprap shoreline protection to insure that it remains in the original footprint, and that it continues to function effectively. The plan shall indicate the frequency of monitoring (at least once every two years), the method that will be used to compare the existing footprint and profile to the as-built plans, the method of reporting monitoring results to the Executive Director (written report or letter), and maintenance activities that would be undertaken to remove riprap that has gone beyond the approved footprint, by either taking it to an approved disposal site or repositioning it within the approved footprint.

14. Study of Sediment Transport, Shoreline Change and Harbor Hydrodynamics. The Permittee is encouraged to actively participate in efforts to study and monitor sediment transport, shoreline change and hydrodynamics for the north harbor area, focusing in particular on conditions prior to the proposed harbor improvements and any changes in conditions that result from the harbor development. This shall include cooperating on any shoreline change surveys undertaken by agencies such as California Department of Parks and Recreation, requesting that the Corps of Engineers study shoreline change, sediment transport and/or hydrodynamic conditions within the Harbor, and/or facilitating the opportunity for consultants and academicians to examine shoreline change, sediment transport or hydrodynamic conditions within the Harbor area.

15. Revisions and Amendments. The Permittee shall undertake development in accordance with the approved final plans identified in Special Condition 1 and dredge episode plans required prior to any dredging as part of this project. Any proposed changes to the approved final plans (including any changes in wharf, seawall, boat ramp, dredge area or coastal trail alignments or construction materials or methodology) shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that the change is immaterial or that no amendment is necessary.

16. **Assumption of Risk, Waiver of Liability and Indemnity Agreement.** The Permittee acknowledges and agrees, on behalf of itself and all successors and assigns: (i) that the site is subject to hazards from episodic and long-term bluff retreat and coastal erosion, tidal scour, wave and storm events, bluff and other geologic instability, and the interaction of same; (ii) to assume the risks to the Permittee and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards; and (v) that any adverse effects to property caused by the permitted project shall be fully the responsibility of the property owner.

3. Recommended Findings and Declarations

The Commission finds and declares as follows:

A. General Project Location & Background

Moss Landing is located near the middle of Monterey Bay between the cities of Santa Cruz (approximately 26 miles north) and Monterey (approximately 18 miles south), and between two river systems, the Pajaro River (approximately 1.5 miles north) and the Salinas River (approximately 4 miles south). (See Exhibit A for regional location map and Exhibit B for site vicinity map, and Exhibit D for an aerial photo of the harbor area.) The Moss Landing Harbor lies just west of Highway One between the mouth of Elkhorn Slough and the head of the Monterey Submarine Canyon.

The Harbor entrance and Elkhorn Slough main channel basically divides Moss Landing Harbor into two parts, referred to as the North and South Harbor areas, respectively (Exhibit D). The North Harbor area occupies a portion of the Old Salinas River near its confluence with Bennett Slough, and the South Harbor area occupies portions of both the Old Salinas River and the mouth of Moro Cojo Slough.

The portion of the Harbor that is subject of this permit is in the North Harbor area and includes the 7.5-acre Harbor District parcel (APN 413-022-003), located along the eastern shoreline, between the main channel of Elkhorn Slough and the Elkhorn Yacht Club, west of Highway One (See Exhibit C).[1] Portions of the project are located seaward of mean high tide and so within the Coastal Commission's jurisdiction, and portions are located landward of mean high tide and so in the jurisdiction of Monterey County Planning Department. Project Description is described fully in Section B below.

[1] A second Harbor District parcel (APN 413-022-010), located north of the Elkhorn Yacht Club, is also described as part of this project, although only existing unimproved parking use is planned to continue on this smaller, 1-acre parcel.

Background

Moss Landing Harbor was created in 1947 when the US Army Corps of Engineers (USACOE) first dredged the Old Salinas River Channel at the mouth of Elkhorn Slough. The Harbor thus occupies a portion of the Old Salinas River channel, paralleling the coast and separated from the ocean by sand spits and dunes. Permanent jetties placed along the north and south sides of the entrance provide year-round access to the Pacific Ocean, due to the large tidal volume exchanged between the ocean and Elkhorn Slough. Tide gates along the north and south ends of the Harbor allow for muted tidal activity within Bennett Slough to the north, as well as in the Moro Cojo Slough and the Old Salinas River channel to the south.

Lands to the west of the Harbor are made up of sand flats and sand dunes that have built atop the sand spits of the Old Salinas River. Most of the land along the southern spit and a portion of land along the northern spit were historically mapped as City Lands of Monterey (the northern extent representing the location of the Old Salinas River mouth; see Exhibit B). Today, there is no ownership or legal connection to the rather distant City of Monterey, and the primary mouth of the Salinas River is several miles to the south. Beach strand and dune fields located in the Moss Landing and Zmudowski State Beaches make up the coast north of the harbor entrance, and extend to the mouth of the Pajaro River. Similarly, coastal beach strand and dune fields extend south of the harbor mouth, to the Salinas River, much of which, south of the harbor comprises the Salinas River State Beach.

East of the Harbor lie the mud flats and tidal marshes of the Elkhorn Slough watershed, which extends inland for nearly seven miles. The 4,000-acre Elkhorn Slough watershed lies east of Highway One and is hydrologically linked with the Pacific Ocean by the diurnal tides that flow through the harbor. Immediately east of Highway One, and north of the main Elkhorn Slough channel, lies the Moss Landing Wildlife Area, a portion of diked wetlands, historically used as salt ponds, but since restored to tidal action and managed by the California Department of Fish and Game. Other upland areas immediately surrounding the Harbor are made up of low rolling hills, which reach about 20 feet in elevation.

The project site sits between Highway One and the north harbor. The upland portion of the site is mostly unpaved, and nearly level with a slight grade to the north. The west and south side of the site are located along the banks of the harbor's edge. The Elkhorn Yacht Club owns the property located north of the Harbor District property. The project site is currently used as a large parking area with two restaurants situated along the southern shoreline along the main Elkhorn Slough channel. The harbor banks are, for the most part, unprotected (though some undersized riprap exists in the vicinity of the new Sea Harvest (formerly Skipper's) Restaurant and Maloney's Harbor Inn Restaurant. The elevation of the parking lot area is approximately 5 feet NGVD. Water levels in the harbor and adjacent Elkhorn Slough channel vary from –5 to +4 feet NGVD, and water can overtop the bank during extreme high tides and wave run-up conditions.

The Moss Landing Harbor, itself, is located adjacent to the Monterey Bay National Marine Sanctuary, which extends from the high tide seaward typically about 35 miles offshore between Marin and San Luis Obispo Counties. The Monterey Bay National Marine Sanctuary is the nation's eleventh and largest

marine sanctuary, protecting marine resources that include the nation's most expansive kelp forests, one of North America's largest underwater canyons, and the closest deep ocean environment to the continental United States (NOAA, 1995).

As a result of the harbor's proximity to open ocean and deep-water marine environments immediately offshore and estuarine environments and tidal sloughs inland, the harbor is highly valued for the commercial fishing, recreational boating and educational opportunities that this location provides. Moss Landing Harbor is one of only six harbors located along the Central Coast area, and is the largest fishing port between San Francisco and Los Angeles with fish landings in excess of 27.5 million pounds per year.

Recreational and Visitor Serving Uses

While the south Harbor area is mainly occupied with commercial fishing, sport fishing, sightseeing, and marine research vessels and businesses (such as boat yards, marine repair, fish processing, and oceanographic instrumentation facilities) that support these industries, the North Harbor area is focused on recreational boating and visitor serving use.

The North Harbor is currently home to approximately 155 recreational motor and sailboats, the Elkhorn Yacht Club, and a commercial kayaking center. Kayakers and other small boat enthusiasts commonly put in from the North Harbor area for day trips into the Elkhorn Slough. During salmon fishing season, the existing parking lot is often filled with cars and boat trailers of recreational fishermen who have used the existing boat ramp to access the harbor and ocean. Visitor-serving commercial facilities (including the Sea Harvest – formerly Skipper's – and Maloney's Harbor Inn Restaurants) are also located along the southern waterfront of the project area. The Sea Harvest Restaurant was recently constructed (pursuant to the Commission's approved CDP 3-99-049) following the 1999 fire that demolished the former Skipper's Restaurant; and with the Commission's approval of 3-99-049A1, additional public access was obtained seaward of the rebuilt restaurant through the addition of a public viewing wharf (in place the floating dock originally proposed.) The public viewing wharf was designed and constructed to match the public wharf and other access elements proposed under the current North Harbor redevelopment project that is the subject of this coastal development permit application.

The Elkhorn Yacht Club (EYC) owns property along the north end of the project site (APNs 413-022-005, -006 and –008). The Harbor District also owns the remaining property north of the EYC property, between the EYC and Jetty Road (parcels 413-022-009 and –010). Jetty Road is basically located at and defines the northern end of the harbor. The Elkhorn Yacht Club, pursuant to an earlier Coastal Commission Administrative Permit (3-98-069) for construction and repair of a sheetpile bulkhead along the shoreline of the EYC property and installation of a small boat hoist, recorded an offer to dedicate a lateral easement for public access across the property. Once picked up by a public agency capable of constructing and managing such an easement, this easement will provide for continued through access between the two Harbor District properties as a segment of the California Coastal Trail.

Past Dredging History.

The Moss Landing Harbor District (MLHD) is responsible for dredging all berthing areas within Moss Landing Harbor, and for maintaining navigational depths in the North Harbor channel. The North Harbor Channel is 75 feet wide and dredged to a depth of –11 feet MLLW (including a 1 foot over dredge). The MLHD also dredges portions of the Federal channel on an as needed basis when requested by the USACOE.

The Moss Landing Harbor District has conducted both maintenance dredging and emergency dredging in the past, as approved by the USACOE and California Coastal Commission (CCC). Dredging activities authorized by the CCC in the last ten years include: CDP 3-96-020 (approved 5/9/96) to dredge and dispose of 31,000 cubic yards (cy) of dredge material from South Harbor channel and dock areas; CDP 3-98-032-G (approved 4/8/98) to conduct emergency dredging and disposal of approximately 22,000 cy from South Harbor locations; CDP 3-99-011 (approved 10/31/99) to dredge up to 150 cy per year from North and South Harbor locations (amended in October 2001 to include dredging up to 30,000 cy from in front of the Moss Landing Power Plant intakes); and CDP 3-01-049 (approved 8/8/02) to dredge up to 100,000 cy annually between 2002 and 2007. Exhibits H and I show the dredge areas and dredge disposal locations approved under the existing long-term maintenance dredging permit currently in force. As described below, the current project proposes to add two new dredge areas in the North Harbor that will initially require approximately 5,000 cy of dredging, and then will likely require a lesser amount of ongoing maintenance dredging.

According to the dredging volume records for the period 1999 to 2000 (detailed in the staff report for MLHD maintenance dredging, 3-01-049), a total of 245,974 cy was dredged by the Harbor District in the past five years (giving an average volume of nearly 50,000 cy per year). Of this, approximately 75% was found suitable for aquatic disposal or beach renourishment, and approximately 25% required confined upland disposal. As shown in Table 1, based on past harbor dredging events, dredged material requiring upland disposal were found in the south harbor, near the Sandholdt bridge, where agricultural sediments first enter the harbor, and near Gravelle's boat yard, where contaminants associated with heavy metals and solvents used for boat repair and bottom paint have been found. Sediments dredged from the harbor mouth and North Harbor area have always been found suitable for beach nourishment or offshore disposal. Based on past sediment these past dredging results, the high velocity currents in the Elkhorn Slough tidal channel, and proximity of the project site to the harbor mouth, it is unlikely that contaminated sediments would be found in any of the dredge areas proposed for this project. However, in the unlikely event that contaminated materials are found, a separate permit will be required to dredge and dispose of contaminated sediments, since the long-term maintenance dredging permit currently in force does not allow dredging of contaminated sediments until an upland rehandling site has been identified and approved by the relevant local, state and federal permitting agencies.[2]

[2] The North Harbor Rehandling Site, which was located on the Harbor District parcel south of Jetty Road (APN 413-022-009) and previously used for rehandling of contaminated soils, has since been restored as required by the Monterey County permit (CDP 98-0137) issued for its use, and no alternate upland rehandling and disposal facility has yet been identified or approved.

Table 1. Currently Approved Dredging Areas in Moss Landing Harbor

Dredge Area[a]	Geographic Areas included	Maximum Dredge Depth[b] (ft MLLW)	Previous Discharge Site Used[c]
South Harbor Area			
A	MBARI dock	-13	AQUATIC
B	South A-Dock	-11	AQUATIC
C	Area South of Federal Channel, F-Dock, Bay Fresh Dock, E-Dock and area south of MBARI dock	-13	UPLAND
D	K-Dock and MLML Dock	-13	UPLAND
E	Gravelle's Dock	-13	UPLAND
F	North A-Dock and south B-Dock	-11	AQUATIC
G	Moro Cojo arm: G-, H-, I-, J- and C-docks	-11	AQUATIC
H1	North B-Dock	-11	AQUATIC
H2	MLPP Intake areas	-23 to -24	UPLAND
North Harbor Area			
I	North Harbor Channel and ramp areas	-11	AQUATIC
J	North Harbor Marina	-11	AQUATIC
North Harbor Sand Bar	-	-11	BEACH
Federal Channel and Turning Basin Areas			
Entrance channel		-17	BEACH
FC-1		-17	AQUATIC
FC-2		-17	UPLAND

a = as shown in Dredge Area Map, see Exhibit H
b = Maximum dredge depth includes a 1 foot overdredge amount, except that Federal Channel may have 2 foot overdredge. MLHD may be required to dredge to shallower depths in some areas on a case-by-case basis, to be determined following review of sediment test results. No dredging is allowed deeper than the maximum dredge depth allowed.
c = Previous Discharge Site Used is based on previous dredging history for each area over the last 5 years of record.
Ft^2 = square feet, MLLW = mean lower low water, cy = cubic yards
Disposal Sites: AQUATIC = Unconfined Aquatic Discharge Site (SF-12); BEACH = Beach Replenishment Site; UPLAND = previously used confined upland discharge sites (i.e., Marina Sanitary Landfill by way of the North Harbor Interim Drying and Rehandling Site); TBD = To Be Determined following sediment sampling and analysis.

B. Project Description

The Moss Landing Harbor District (MLHD) proposes to redevelop the North Harbor area (APN 413-022-010) for public visitor serving and recreational uses. As a result of the various types of visitor serving commercial and public access uses being proposed, portions of the project will be located seaward of mean high tide and so within the Coastal Commission's jurisdiction, and portions will be located landward of mean high tide and so in the jurisdiction of Monterey County Planning Department.

Those portions of the North Harbor Redevelopment Project located within the Coastal Commission's jurisdiction, and thus the subject of this staff report, include the following:

9. Demolition of Existing Structures. Demolition of the existing Maloney's Harbor Inn

restaurant and other abandoned waterfront structures that extend into and over the harbor waters, including removal of existing pilings to at least 2' below bottom surface.

10. **Riprap Shoreline Protection.** Installation of approximately 1,900 cy of riprap for shoreline protection along 1,000 linear feet of shoreline, to be placed under wharf, between the wharf and new 4-lane boat ramp, around the new boat ramp and north to the existing 2-lane boat ramp. Existing riprap located along the shoreline between Maloney's Harbor Inn and the Sea Harvest (formerly Skipper's) Restaurant will be removed and replaced with new, better quality material, and additional riprap will be placed along the upper slope to protect fill used to raise the existing grade of the site to the elevation of the new building pads (which are being raised to a minimum elevation of 5 feet NGVD in order to be located out of the 100-year flood elevation).

11. **New 4-lane Boat Launch.** Construction of a new four-lane concrete boat ramp (approximately 125 foot long by 90 feet wide, requiring 2,500 cy of dredging, 410 cy of concrete fill for ramp, 1,600 cy of fill under ramp, and 200 cy of riprap protection around ramp); with 3 floating docks (each 120 feet long by 10 feet wide, requiring 9 concrete or steel pilings). The new boat ramp will be funded by the California Department of Boating and Waterways and will supplement the existing 2-lane public boat ramp located just south of the Elkhorn Yacht Club. As proposed, the existing boat ramp will be dedicated to non-motorized vessel use (eg., kayaks and canoes), and the new 4-lane boat ramp will be dedicated for larger vessels on trailers, including motorized recreational and sport fishing boats.

12. **Public Wharf and Pedestrian Promenade.** Construction of a new 15,000 square foot public wharf with seating and pedestrian promenade for coastal trail. The new wharf will be approximately 375 feet long, and from 24 to 40 feet wide, with a maximum of 175 24"-diameter concrete or steel pilings. Wharf decking will be wood, supported by a concrete, steel or wooden sub-structure that will connect the piles to each other for additional lateral support (similar in construction, and at the same elevation as the already completed wharf section located seaward of the rebuilt Skipper's – now Sea Harvest – Restaurant). The public wharf will extend from the southeastern end of the project area to the north transient dock gangway.

13. **North Transient Dock.** Construction of one floating dock (approximately 260 feet long by 12 feet wide with 12 concrete or steel pilings, and ADA accessible gangway) located between new boat launch area and Sea Harvest Restaurant, and to be used for guest berthing and overnight berthing of vessels visiting the harbor.

14. **South Transient dock.** Construction of one floating dock (approximately 170 feet long by 12 feet wide with 10 concrete or steel pilings, and ADA accessible gangway) located west of Highway One bridge along main Elkhorn Slough channel to provide guest berthing for deeper draft vessels.

15. **Coastal Trail.** A demarcated, ten-foot wide pedestrian access trail along the seaward extent of the public wharf.

16. **Dredging.** The project requires a total of approximately 5,000 cy of dredging of harbor bottom sediments, with approximately 2,500 cy dredged from both the boat ramp area and the north transient dock area (see Exhibit F). Dredging will be conducted consistent with the approved protocol and requirements of the Harbor District's existing long-term maintenance dredging permit currently in force (CDP 3-01-049), including conducting sampling and dredge disposal site suitability analyses prior to dredging. Uncontaminated dredged materials will be disposed of at the approved offshore aquatic discharge site (SF-12) located in Monterey Bay or at the approved beach renourishment site located on Moss Landing Beach, south of the harbor entrance (see Exhibit I).

Portions of the project located within the regulatory jurisdiction of the Monterey County Planning Department, and recently approved by the Planning Commission's Final Local Action Notice PLN 020485 (CDP 3-MCO-04-094, dated February 25, 2004) include the following:

7. Relocation of building pads for the Maloney's Harbor Inn Restaurant and adjacent abandoned building (to be rebuilt for use as an interpretive center/commercial building/harbor district office building) approximately 35 feet landward. (Future reconstruction of the buildings, and additional restroom facilities, will require a separate coastal development permit.)

8. Installation of public parking improvements for automobiles and boat-trailer parking (increasing permanent public parking from approximately 226 car spaces to a total of 384 – including 142 car spaces and 121 car/trailer spaces, and adding approximately 70 temporary spaces within the Caltrans right-of-way),

9. Reduction of the number of ingress/egress locations along Highway One from three different entrances to one main entrance,

10. Widening of the main entrance and developing acceleration and deceleration lanes to/from Highway One for safer access to the site.

11. Development of a Class I bike trail along Highway One (within the Highway One right-of-way).

12. Development of a coastal trail along the existing shoreline (which also extends from the main entrance at the northeastern end of the site, west to the shoreline, then south along the shoreline, where it crosses into the Coastal Commission's jurisdiction as it extends across the wharf promenade to the southeastern end of the site).

As approved by the County, parking lot improvements will include grading and paving of the existing parking lot, installation of adequate drainage to control onsite runoff and increasing the base elevation of the parking lot to decrease the onsite potential for flooding. As shown on the revised site plan (dated May 7, 2004), the project includes a boat wash-down station with a sand/grease interceptor, and four drain inlets, all of which drain to the harbor (see Exhibit F). While the parking area and drains are

located within the County's jurisdiction, discharge to the harbor is located within the Commission's jurisdiction, and so will be required to be consistent with Coastal Act water quality protection policies.

Project plans originally submitted to the Commission, and approved by the County, include several elements that have been removed from the project plans, including the following: a concrete bulkhead under the public wharf, which were both originally designed to extend all the way from the new proposed boat ramp to the Highway One bridge; a sheetpile bulkhead along the seaward edge of the coastal trail between the new and the existing boat ramps, and concrete tidal steps at the north end of the project area, just south of the existing boat ramp, which were to provide access to the intertidal sandbar located in that area. As described in the revised project description submitted by the applicant (dated May 6, 2004), and as shown on the revised preliminary site plan and cross sections (dated May 7, 2004), the concrete abutment, sheetpile bulkhead and tidal steps are no longer part of the proposed project, and the public wharf now extends only as far north as the proposed gangway for the north transient guest dock.

Permit Jurisdiction

Based on a boundary determination conducted by Commission mapping staff, portions of the project are located in either Coastal Commission original jurisdiction (seaward of mean high tide or on public trust lands), or within Monterey County's coastal development permit jurisdiction (where the Commission still retains appeal jurisdiction). Regulatory jurisdiction for the various elements of the proposed project has been determined by discussions between Commission coastal analysts, Commission mapping staff and County planning staff. Table 2 shows the different project components and the permit jurisdiction determined for each.

The County Planning Commission has conditionally approved those components located in the County's jurisdiction, and has granted a design approval for those portions of the project located within the Costal Commission's original jurisdiction (see Planning Commission Final Local Action Notice Resolution 04008 for PLN020485; Coastal Commission number 3-MCO-04-094 included as Exhibit K).

This Coastal Commission permit thus deals with the proposed riprap shoreline protection, public wharf and pedestrian promenade, south transient dock, north transient docks, new 4-lane boat ramp/launch, the dredging, fill and piling emplacement necessary to construct these project components, and pedestrian coastal trail to be located along the seaward edge of the public wharf promenade, which will also link to the coastal shoreline trail and Highway One bicycle route approved by the County, as well as to other coastal trail easements required by previous Coastal Commission actions.[3]

Table 2. Project Components Jurisdiction Matrix

Project Components	Review Authority

[3] CDP 3-98-069 for the Elkhorn Yacht Club, and CDP 3-99-049 for rebuild of Skipper's –now Sea Harvest – Restaurant site.

	Monterey County	Coastal Commission
General Development Plan – includes plans for paved parking lot, demolition of existing structures, relocation of building pads landward for future rebuild of demolished structures (Maloney's Harbor Inn restaurant and interpretive center/commercial building), landscaping, restrooms, coastal and bicycle trails, Highway One access improvements, and existing boat launch	Permit	Appeal
CDP for development within 100 feet of ESHA	Permit	Appeal
Public Wharf and Pedestrian promenade	Design Approval	Permit
North Transient Docks	Design Approval	Permit
South Transient Dock	Design Approval	Permit
Boat Launch/Ramp	Design Approval	Permit
Rip-rap shoreline protection	Design Approval	Permit

C. Previously Approved Project & Related Commission Actions

Previous permit and amendment descriptions including CDP numbers and dates are listed in Table 3. The Commission has extensively conditioned the previous Harbor District dredging permits and amendments in order to protect marine resources, environmentally sensitive habitats, water quality and public access. The Commission has also conditioned previous permits in the North Harbor area to incorporate public access conditions to allow vertical access to the shoreline and lateral through access along the shoreline.

Table 3. Previously Approved Projects in North Harbor Area.

Permit Number	Name	Comments
3-98-069	Elkhorn Yacht Club sheetpile bulkhead and boat hoist	Permittee recorded Offer to Dedicate public access easement

Permit Number	Name	Comments
		across parcel to allow N/S access for California Coastal Trail
3-99-049 3-99-049-A1	Skipper's Restaurant rebuild	Building site and public wharf designed and constructed consistent with currently proposed project.
3-01-049	MLHD Harbor Dredging Permit (2002 – 2007)	Allows for dredging and disposal of uncontaminated sediment at approved offshore and beach renourishment sites; does not allow for dredging of nun-suitable material since no approved upland rehandling site has been developed or identified.
3-83-350	MLHD Parking lot improvements	Permitted 2-lane boat ramp and paved parking area near Elkhorn Yacht Club

D. Standard of Review

As proposed, major portions of the project (including the public wharf, south transient guest dock, north transient guest dock, new boat launch facility, rip-rap shore protection, coastal trail, dredging, fill and piling emplacement), would take place within the Commission's original permit jurisdiction in the Moss Landing Harbor and Monterey Bay. In general, original Commission jurisdiction is over existing and former (now filled) tidelands. Regulatory jurisdiction for lands above the ambulatory mean high tide line were granted to Monterey County in 1988 following certification of the Monterey County Local Coastal Program. As no current upland rehandling sites have been identified or approved, most dredging activities would be within the Commission's original jurisdiction and conducted consistent with the existing dredging permit currently in force (CDP 3-01-049); however, consistent with CDP 3-01-049, the placement of discharge pipeline may be located in both the Commission's and Monterey County jurisdiction.

The standard of review for new development in the Commission's original jurisdiction area is the Coastal Act. The standard of review for new development located within Monterey County's coastal permit jurisdiction is the certified Local Coastal Program (LCP), and with respect to public access and recreation, the applicable Chapter 3 policies of the Coastal Act. Monterey County's certified LCP includes the North County Land Use Plan (LUP) with specific requirements for the Moss Landing Area. Because portions of the project, such as the demolition of existing structures, relocation of building pads coastal trails, and new and existing boat launches) may span the jurisdictional boundary, and because in numerous respects coastal resource issues demand that the project be understood in their entirety, regardless of jurisdictional boundaries, the following findings, where necessary, discuss portions of the project located beyond the original jurisdiction area.

E. Issues Discussion

1. Land Use Priorities

a. Issue

Coastal-dependent and coastal-related uses are among the highest priority Coastal Act uses. The proposed project includes demolition of existing visitor serving commercial structures, and landward relocation of building pads for future rebuild of the structures, in order to provide for continued use of these structures out of danger from coastal erosion and flooding. It involves protecting existing coastal-dependant facilities (existing parking lot and 2-lane boat ramp) that provide access for recreational boaters and general access to the harbor shoreline, and construction of new coastal dependant, public access and recreational boating facilities (new 4-lane boat launch, north and south transient guest docks, public wharf and coastal trail) for increased public use and access to the harbor shoreline and coastal waters.

b. Relevant Regulatory Policies

The Coastal Act defines coastal-dependent and coastal-related as follows:

> ***Section 30101.*** *"Coastal-dependent development or use" means any development or use which requires a site on, or adjacent to, the sea to be able to function at all.*
>
> ***Section 30101.3.*** *"Coastal-related development" means any use that is dependent on a coastal-dependent development or use.*

Section 30001.5 states in part:

> ***Section 30001.5.*** *The Legislature further finds and declares that the basic goals of the state for the coastal zone are to:*
>
> *(a) Protect, maintain, and where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources. ...*
>
> *(c) Maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resource conservation principles and constitutionally protected rights of private property owners.*
>
> *(d) Assure priority for coastal-dependent and coastal-related development over other development on the coast ...*

Coastal Act Section 30234 and 30255 also provides:

> ***Section 30234.*** *Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists*

or adequate substitute space has been provided. Proposed recreational boating facilities shall, where feasible, be designed and located in such a fashion as not to interfere with the needs of the commercial fishing industry.

Section 30234.5. *The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.*

Section 30255. *Coastal-dependent developments shall have priority over other developments on or near the shoreline. Except as provided elsewhere in this division, coastal-dependent developments shall not be sited in a wetland. When appropriate, coastal-related developments should be accommodated within reasonable proximity to the coastal-dependent uses they support.*

While the Coastal Act is the standard of review for projects in the Commission's original jurisdiction, the certified Monterey County LCP can be used to provide guidance in the area, since it includes policies related specifically to the Moss Landing Community and the Moss Landing Harbor. The LCP in fact recognizes the historic, scenic, harbor, and environmentally sensitive habitat resources of the Moss Landing area. Chapter 5 of the North County Land Use Plan (LUP) contains the Moss Landing Community Plan, which includes a series of policies to guide additional harbor development, provide access, and protect scenic and sensitive environmental resources. In a nutshell, different priority uses are assigned to different locations in Moss Landing, such as coastal-dependent, light industrial uses on the Island (west of the Harbor) and visitor-serving commercial and recreational uses in the North Harbor area, west of Highway One.

The Monterey County LCP has designated most of the subject area as Commercial Recreation and Visitor Serving, with a portion of the area designated as Public/Quasi Public Harbor Facilities (see Exhibit L – Land Use Plan). The parcel is zoned Visitor Serving Commercial (VSC(CZ)).

According to the North County LUP Section 5.2.B.1, the area in the North Harbor designated as Public/Quasi-Public Harbor facilities applies to Harbor District land proposed for harbor support facilities. The LUP goes on to state that:

Public facilities in the North Harbor would include a boat launching ramp, additional dry storage areas, and restroom facilities for non-yacht club members.

Other policies pertaining to harbor support facilities are contained in North County LUP Section 5.3, which notes that:

…demand for commercial and recreational boat berths and related facilities far exceeds the available supply in the existing harbor area…constraints in the North Harbor include a lack of restroom facilities for non-yacht club members; lack of a boat ramp and/or hoist for use by recreational boaters without berths; limited dry storage and parking areas… However, when retaining walls are developed and dredging is completed along the shoreline, additional slips or other harbor support uses may be possible.

The key commercial fishing and recreational boating facilities policy in the North County LUP states that:

> *Policy 5.3.1. The County encourages the maximum development of commercial fishing and recreational boating facilities at Moss Landing, consistent with the conservation of the area's wetlands, dunes and other natural resources.*

Finally, specific North County LUP policies for development of the North Harbor area include the following:

> *Policy 5.3.2.1. Commercial fishing facilities shall be protected and where feasible upgraded. Commercial fishing shall have priority for berthing space in the South harbor, and recreational boating facilities shall not interfere with the needs of the commercial fishing industry.*
>
> *Policy 5.3.3.7. An additional boat launching ramp or hoist should be provided. A possible location would be in the North Harbor just south of the Elkhorn Yacht Club.*
>
> *Policy 5.3.3.8. Develop a retaining wall or bulkhead along the eastern bank of the North Harbor adjacent to the Harbor offices as a means of preventing further erosion and improving berthing capacity.*
>
> *Policy 5.3.3.11. Priority shall be given to developing recreation and visitor serving commercial uses in the North Harbor area and improving public recreational boating facilities.*
>
> *Policy 5.3.3.12. Upgrading and development of recreational boating support facilities should not jeopardize conservation of sensitive mudflat habitats in North Harbor.*
>
> *Policy 5.3.3.13. Additional restroom facilities should be provided in the North Harbor area.*

c. Analysis

The Moss Landing Harbor is one of only six harbors located along the Central Coast, and is the primary commercial fishing port in Monterey Bay area. The MLHD maintains a total of 488 berths within the Harbor that are used by commercial fishing, recreational and research vessels. Approximately 175 recreational boats and 200 commercial boats are berthed in the Harbor. The Harbor is also home to the largest number of research vessels berthed within the Central Coast area, supporting the Monterey Bay Aquarium Research Institute, the California State University Moss Landing Marine Lab, and the Elkhorn Slough National Estuarine Research Reserve.

Moss Landing is a special community containing recreational boating facilities and coastal-dependent industries. Competition for scarce land and water makes it important to protect priority uses in and around the Harbor, and to maintain the community fabric and visual and natural resources values.

Section 30234 of the Coastal Act provides that facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded, and the LCP policies state that while priority for berthing in the South Harbor is given to commercial fishing vessels, priority in the North

Harbor area is given to developing recreation and visitor serving commercial uses and improving public recreational boating facilities.

The proposed project does serve to improve recreational boating and visitor serving commercial uses in the North Harbor area, consistent with the County's LCP, through the construction of the new boat launch, public wharf and transient guest-docks. The new and improved recreational boating facilities (boat launch, and guest docks) located in the North Harbor area will serve to direct most of the recreational boating day-use and guest use into the North Harbor area, and out of the South Harbor area where they might otherwise interfere or compete with the navigational and berthing needs of commercial fishing vessels. Section 30255 of the Coastal Act provides that coastal-related developments should be accommodated close to the coastal-dependant uses they support. Improvements to the existing parking lot, main entrance and relocation of the visitor serving commercial businesses inland to avoid coastal hazards and flooding serve to further support the coastal-dependant recreational boating use and public access opportunities provided by this site.

d. Conclusion

The provision and expansion of boating facilities and visitor serving recreational facilities in the North Harbor area is considered a high priority under the Coastal Act, and, as designed to include a new boat ramp, public wharf, shoreline protection, and transient docks, in addition to those elements approved by the County (including public parking, drainage, traffic circulation improvements and additional restrooms), the project is consistent with the Monterey County LCP, including policies of the North Monterey County Land Use Plan and Moss Landing Community Plan for this area.

The proposed expanded boating and visitor serving facilities not only support coastal-dependant uses, but also are integral to such uses and therefore have a priority under the Coastal Act. The project gives priority to coastal access and recreation by locating the public wharf and promenade seaward of the commercial visitor serving businesses, and so provide public pedestrian access to all, without requiring patronage of existing businesses in order to enjoy such views. Additionally, the project serves to protect and improve coastal-related uses (by reducing risk of shoreline erosion at the site, improving public parking for autos and boat trailers, improving drainage, creating a new boat wash down area, relocation and future rebuild of commercial visitor serving uses and construction of an interpretive center and additional restrooms) that support the high priority coastal-dependant uses proposed by the project. Accordingly, the Commission finds that the proposed development is a high priority coastal use that is consistent with the land use priorities of Coastal Act Sections 30001.5, 30234 and 30255.

2. Geologic Conditions and Hazards

Coastal Act Section 30235 addresses the use of shoreline protective devices:

> ***30235.*** *Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline*

sand supply. Existing marine structures causing water stagnation contributing to pollution problems and fish kills should be phased out or upgraded where feasible.

Coastal Act Section 30253 addresses the need to ensure long-term structural integrity, minimize future risk, and to avoid landform altering protective measures in the future. Section 30253 provides, in applicable part:

Section 30253. *New development shall:*

(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.

(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

2a. Shoreline Protection Structures

Coastal Act Section 30235 acknowledges that seawalls, revetments, cliff retaining walls, groins and other such structural or "hard" methods designed to forestall erosion also alter natural landforms and natural shoreline processes. Accordingly, with the exception of new coastal-dependent uses, Section 30235 limits the construction of shoreline protective works to those required to serve coastal-dependant uses, or to protect existing structures or public beaches in danger from erosion. The Coastal Act provides these limitations because shoreline structures can have a variety of negative impacts on coastal resources including adverse affects on sand supply, public access, coastal views, alteration of natural landforms and overall shoreline beach dynamics on and off site which may ultimately result in the loss of public beach. The Commission must always consider the specifics of each individual project, but prefers to see designs that avoid the necessity for shoreline structures that armor the shoreline and alter the natural dynamics.

Under Coastal Act Section 30235, a shoreline structure must be approved if: (1) it serves a coastal dependant use; or (2) there is an existing structure; (3) the existing structure is in danger from erosion; (4) shoreline-altering construction is required to protect the existing threatened structure; and (5) the required protection is designed to eliminate or mitigate its adverse impacts on shoreline sand supply. The first four questions relate to whether the proposed armoring is necessary, while the fifth question applies to mitigating some of the impacts from it.

A. Shoreline Structure Proposed to Serve Coastal Dependant Use

The Applicant proposes shoreline armoring (1,900 cy of rock riprap) along 1,000 linear feet of the North Harbor shoreline to prevent shoreline erosion of the site, which supports coastal dependant uses by providing auto and boat trailer parking, gangway access to transient guest docks, and public access (from the shoreline and proposed wharf) to harbor waters and views. As proposed, the riprap will be used to protect the new proposed 4-lane boat ramp, the shoreline under and around the new wharf, the shoreline between the north end of the wharf and the boat ramp, and the remaining North Harbor shoreline between the new and existing boat ramps, which will support long-term continued use of the

Harbor, which itself is a coastal dependent use. As described above, the project has been found to provide for high priority coastal-dependant use by expanding recreational boating and public access opportunities in the North Harbor area. Furthermore, the proposed improved parking lot, coastal trail and relocated commercial visitor serving facilities (while within the County's regulatory jurisdiction) are considered coastal-related facilities that support the coastal dependant use of the site. In this specific case, the parking lot located at the North Harbor site is also unique in that by providing for auto and boat trailer parking, it provides access to and parking for coastal-dependant use of the harbor itself, and as such, can be considered an integral component of the coastal-dependant use of the site.

B. Existing Structures at Risk

The shoreline armoring is also being proposed to reduce shoreline erosion that threatens existing structures at the site. Currently, several structures are located on the North Harbor shoreline at this location. They include the Maloney's Harbor Inn Restaurant, which extends out and over the harbor atop wooden pilings, and three other smaller abandoned structures located to the west and northwest of the restaurant (see Exhibit E). As described in detail in Section 3c, below, while the existing buildings have been found to be historic structures, the structural condition of these buildings is such that repair or restoration is not feasible. The applicant have therefore proposed to demolish these structures (under this permit) and have gotten approval from the County for relocating the building pads 35 feet landward in order to construct a public wharf seaward of these structures, which will provide for greater public access along the shoreline. While moving the existing buildings landward removes the immediate threat to those structures, the existing parking lot itself is at risk of erosion from tidal scour and wave action.

Parking lots are sometimes not considered structures for the purposes of Section 30235, since they may be accessory to the principle use of the site and can potentially be sited or relocated away from the shoreline. However, in this special case, the unimproved parking lot within the project site has provided access to the site since the buildings were first located in this area, and has been used for parking and access to the North Harbor shoreline at least since that time. The parking lot itself serves an essential role in providing access to the Harbor, the shoreline and the boat ramps (existing and proposed), and in providing storage for the essential gear (parking of autos and boat trailers) necessary to make use of the coastal-dependant uses the boat ramps and guest docks provide. Thus in this specific case, for the purposes of Section 30235, the North Harbor parking lot can be considered an existing structure that also serves coastal dependent uses.

C. Danger from Erosion

The Coastal Act allows shoreline armoring for coastal dependant uses or to protect existing structures in danger from erosion, but it does not define the term "in danger." There is a certain amount of risk in maintaining development along a California coastline that is actively eroding and can be directly subject to violent storms, large waves, flooding, earthquakes, and other hazards. Within the harbor environment, shoreline erosion, both long-term and episodic, can also result from tidal scour, wind waves, reflected waves and boat wakes. These risks can be exacerbated by such factors as sea level rise and localized geography that can focus storm or tidal energy along particular stretches of coastline. As a result, some would say that all development along the immediate California coastline is in a certain amount of

"danger." It is a matter of the degree of threat that distinguishes between danger that represents an ordinary and acceptable risk, and danger that requires shoreline armoring per 30235. Lacking Coastal Act definition, the Commission's long practice has been to evaluate the immediacy of any threat in order to make determinations as to whether an existing structure is "in danger." While each case is evaluated based upon its own particular set of facts, the Commission has generally interpreted "in danger" to mean that an existing structure would be unsafe to occupy within the next two or three storm season cycles (generally, the next few years) if nothing were to be done (i.e., in the no project alternative).

The Applicant has submitted the following geotechnical evidence to support the allegation that the existing structures, and entire site is in danger from erosion:

- *Geotechnical and Coastal Engineering Study for Shorefront Improvements Moss Landing Harbor, prepared for Moss Landing Harbor District* by Haro, Kasunich & Associates Inc., dated June 1998 (HKA 1998);

- *CEQA Mitigated Negative Declaration North Harbor Shoreline Protection Project*, prepared by the Moss Landing Harbor District, dated May 21, 1999 and approved by the Moss Landing Harbor District April 3, 2000 (MND/IS 2000).

The Applicant's geotechnical consultants and engineers conclude that the North Harbor site is in danger from erosion as that term is understood in the Act.

The geologic setting of the Moss Landing Harbor is described in the final EIR for the Moss Landing Harbor Master Plan (1987), as well as the geotechnical report (Geotechnical and Coastal Engineering Study for Shorefront Improvements, Moss Landing North Harbor) prepared for the project by Haro, Kasunich and Associates (June, 1998). Surficial geology in the Moss Landing Harbor area consists of sands, silts, and clays with interbedded gravels deposited in marine/estuarine, fluvial, and dune environments. Sediment accumulations in the Harbor are from four sources: littoral transport, watershed runoff, aeolian (wind-transported) sands, and erosion of the shoreline inside the Harbor. Past dredging in the Harbor has found that bottom sediments are generally composed of sands in the entrance channel and areas closest to the channel, and grade to silts and clays in both the north and south ends of the Harbor.

As described in the geotechnical report, the North Harbor site is nearly level with a slight grade to the north. The banks along the shoreline extend about 3 to five feet above the adjacent mud and sand flats, and are for the most part unprotected and erosional. Some riprap (better described as concrete and rock rubble) exists at the toe of the bank around the existing restaurants, near the existing boat ramp and along portions of the remaining shoreline between these areas (see Exhibit M). Iceplant has grown in some areas along the banks, which are fairly vertical to slightly sloping. The general soil conditions below the parking lot site consist of interbedded sands, silts and clays, as a result of the alluvial environment created by the Elkhorn Slough and that same material deposited on site during the original dredging and construction of the Harbor in the mid-1940s.

The unimproved parking lot area lies at the top of the bluff, located at an elevation of approximately 5

feet NGVD (approximately 8 feet MLLW). Tide levels range from –5 to +4 feet NGVD (approximately -2 to +7 feet MLLW). Mean high tide level is 1.8 feet NGVD (+4.6 feet MLLW). The geotechnical report indicates that water has overtopped the bank during extreme high tides and wave runup conditions.

Shoreline Erosion

HKA evaluated aerial photographs spanning the years from 1952 through 1989 and noted that the bluffs along the North Harbor's western shoreline had eroded significantly over that time. Aerial photo analysis found that along the project area's western shoreline, near the center of the parking area, about 25 to 35 feet of bluff recession had occurred over the 37 years of record (giving an "average" erosion rate of 0.7 to 0.9 feet per year over this time frame), although most of the site experienced only about half that amount of erosion (nearly 12 to 17 feet of erosion or about half a foot per year). The HKA geotechnical report also indicates that fill had been placed along portions of the bluff face at various times in the past to mitigate ongoing erosion and bluff recession, and that because the surface of the parking area is located so close to mean sea level, it is exposed to erosion from wave overtopping and wave impact. Poor surface drainage control in the parking area has also caused erosion and gullying of the unprotected bluff face. Given that access to the boat ramps and docks requires the parking lot be located adjacent to these structures, erosion of 0.5 to 0.9 feet per year puts the parking lot at an immediate risk of erosion.

The southern shoreline of the North Harbor project site is also subject to tidal scour due to its proximity to the harbor mouth and Elkhorn Slough main tidal channel. During harbor construction the sand dunes west of the mouth of Elkhorn Slough were breached to create the harbor entrance. Since that time, tidal currents in and out of the Elkhorn Slough have increased, and channel down cutting and active bank erosion has been observed in the tidal slough system. According to the HKA report, tidal current velocities of 3.6 feet per second (which have the ability to transport sands and silts) have been measured at the Highway 1 Bridge and approximately 2.2 feet of foundation settlement has been measured under Maloney's Restaurant from tidal scour (for which emergency piling repair has been required in the past). Studies conducted by Philip Williams and Associates, 1992, and Malzone and Kvitek, 1994 also indicate that tidal volume in the slough has increased over time, and since the tidal prism (volume of water exchanged over an average tidal cycle) has not reached an equilibrium, tidal scour can be expected to continue unless engineering measures are taken to reduce the tidal volume. The deepest portion of the main channel is currently –25 feet NGVD (-22 feet MLLW); therefore there is the potential for additional tidal scour along the southern shoreline of the North Harbor site. Absent toe protection, the exposed sandy soils of the site are highly erodable due to wave impact, wave overtopping, and tidal scour.

Slope Stability

In addition to the erosion and bluff retreat process described above, coastal bluffs are subject to mass wasting (sloughing, landslides, etc), which have the capacity to place structures on blufftops at risk. Measuring the degree of threat thus also requires evaluating the stability of the bluff materials themselves and their ability to resist failure.

A landslide occurs because a number of factors come together; these include the overall geometry of the hillside (or bluff), decreases in the effective normal stress at depth caused by increased water in the slope (buoyancy forces); and the strength of the bluff materials themselves. Landslides on coastal bluffs occur at least partly because marine erosion continually undermines the toe of the bluff, creating an unsupported geometry that is prone to landsliding. The risk of landslide can be quantified, to some extent, by taking the forces resisting a landslide (principally the strength of the materials along a potential slide plane) and dividing them by the forces driving a landslide (principally the weight of the materials as projected onto the potential slide plane). If the quotient, called the factor of safety, is 1.0, failure is imminent. The factor of safety should never, in theory, be below 1.0, as a slide would have already occurred. Factors of safety greater than 1.0 lead to increasing confidence that the bluff is safe from failure.

Slope stability can be evaluated quantitatively by a "slope stability analysis." In practice, hundreds of potential slide planes are typically evaluated. The one with the lowest factor of safety is the one on which failure will occur. So the potential slide plane with the minimum factor of safety is the appropriate one to design for. If one steps back far enough from the edge of the bluff, potential slide planes intersecting the top of the bluff generally will have higher and higher factors of safety. A factor of safety of greater than or equal to 1.5 is the industry standard for new development to be "safe" from a landslide. During an earthquake, additional forces act on the bluff, and a landslide is more likely. To test for the stability during an earthquake, a "pseudostatic" slope stability analysis can be performed. This analysis is rather crude, but the standard methodology is to apply a "seismic coefficient" of 15% of the force of gravity (0.15g), the force of which is added to the forces driving the landslide. The standard for new development in California is to assure a minimum factor of safety greater than or equal to 1.1 in the pseudostatic case.

As described above, the geology at this location consists of unconsolidated alluvial deposits and harbor dredge material (interbedded sands and clays) that have been placed on site as a result of original harbor construction. While much of this material has been somewhat compacted by use of the site, the top 40 feet below the surface are comprised of relatively loose unconsolidated materials. The HKA slope stability analysis found that the North Harbor bank slopes were stable during a design earthquake, but were subject to slope failure from erosional processes that occur at the site from overland surface flow and wave runup, and would continue to occur if the slopes are left unprotected.

Erosion Conclusion

Although the project site inside the harbor is protected from direct ocean waves, its close proximity to the harbor mouth and adjacent to the main Elkhorn Slough channel leave it susceptible to refracted south and southwesterly waves entering the harbor mouth, small wind waves generated within the harbor, reflected waves and boat wakes, and tidal scour due to the diurnal tidal exchange between the ocean and the Elkhorn Slough. The soils at the site are highly erodable, consisting almost entirely of loosely consolidated sands and clays. Because the surface elevation of the North Harbor site is so close to sea level, the site is also susceptible to wave impact, overtopping, flooding, and gullying due to poor drainage from the site to the harbor. These erodable soils, which are vegetated only in some areas of the

shoreline, are not able to protect the site from wave attack and tidal scour. Foundation settlement of over 2 feet due to tidal scour has been documented under the Maloney's restaurant and emergency efforts have been required to repair the support pilings for the structure, most of which is located over the harbor waters along the southern shoreline adjacent to the Elkhorn Slough main channel. It is likely that continued tidal scour will occur in this area due to increased tidal prism (and hence tidal velocities) until an equilibrium is reached between channel cross sectional area and tidal dynamics, or an engineering structure is installed to control the volume of water entering the slough system. Since equilibrium has not been reached and no such engineering solution has yet been determined, it can thus be expected that the shoreline along the main channel will continue to experience erosion due to tidal scour, and wave energy.

As such, in this special case, the North Harbor parking lot itself qualifies as an existing structure in danger from erosion for purposes of Section 30235.

D. Feasible Protection Alternatives to a Shoreline Structure

The next Section 30235 test that must be met before a shoreline protective device can be approved is that the proposed armoring is "required" to serve the coastal-dependant use or to protect existing threatened structures. In other words, shoreline armoring shall be permitted if it is the only feasible alternative for serving the coastal-dependant use or capable of protecting the structure.[4] Other alternatives typically considered include: the "no project" alternative; drainage and vegetation measures on the blufftop itself abandonment or relocation of the threatened structures; sand replenishment programs; other less damaging structural alternatives; and combinations of some or all of these options. The Applicant has evaluated the "no project alternative", has proposed improving the drainage and landscaping for the parking lot itself, and has already proposed relocation of the existing restaurant and other waterfront buildings. Other less damaging structural alternatives include minimizing riprap revetment by using sheetpile bulkhead north of the proposed new 4-lane boat ramp. Original project materials submitted with the project application actually did include a sheetpile bulkhead along this portion of the shoreline, prior to revision of project plans and removal of this element from the proposed design.

Since the first part of the test revolves around whether a shoreline structure is necessary, the first question to evaluate is whether non-structural alternatives can effectively protect the site and existing threatened structures.[5] Applicable non-shoreline structure alternatives include the no-project alternative and drainage and landscaping measures.

The No-Project Alternative

The applicants evaluated the no-project alternative and, based on geotechnical results, determined that

[4] Note that Coastal Act Section 30108 defines feasibility as follows: "Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

[5] Only the non-shoreline structure alternatives are relevant to the current 30235 test; alternative armor designs is a discussion relevant if armoring is deemed necessary.

the site would continue to experience shoreline erosion from wave impact and overtopping, flooding, poor drainage, and tidal scour. It is likely that erosion rates of up to a foot per year (or more due to sea level rise) would continue to occur along the western shoreline, reducing the area available for parking associated with high priority coastal recreational use of the site (for recreational boating and sport fishing). Similarly, tidal scour would continue to undermine the foundation for piling supports for the restaurant and waterfront structures located along the southern shoreline, until tidal equilibrium is reached or an engineering solution is found to control tidal exchange between the ocean and Elkhorn Slough. The no action alternative would also result in adverse impacts to water quality conditions at the site due to lack of water quality protection measures, uncontrolled runoff that carries additional pollutant and sediment loads to harbor waters.

Drainage and Landscaping

Although not analyzed by the Harbor District, another non-shoreline structure alternative typically considered by the Commission to respond to erosion is the use of selected bluff plantings and improved blufftop drainage controls. In this case, an element of the project approved by the County includes grading and paving the existing dirt parking lot, and installing two sediment traps and oil/water separators to improve drainage and water quality prior to discharge to the harbor. As shown in revised site plans, however, portions of the site closest to the shoreline will not be paved, and no written description of these areas has been given. Discussions with the project engineers has indicated that these areas, which are located around the relocated building pads and shoreline coastal trail, will remain unpaved, but will be graded and landscaped as part of the project. Such landscape plans have not yet been developed, so it is difficult to evaluate if landscaping along the bluffs alone would minimize the need for shoreline protection. It is more likely that vegetation at the top of the bluff with appropriate native species would help to stabilize the slope, but would not be able to perform in such a manner as to prevent shoreline erosion at the North Harbor site.

Rather, these types of "soft" alternatives can serve to greatly extend the design life of setbacks by increasing bluff stability and slowing erosion. Thus, they must be understood as alternatives that can allow for natural processes to continue while simultaneously providing continued stability to the bluff. Given the active forces of erosion taking place unabated along the unprotected harbor shoreline, erosion will eventually (over the long-term) result in bluff retreat in the project area. At which point, in some areas, plantings and bluff drainage controls may not be adequate to address the erosion problem themselves, and other alternatives could become more feasible (including wholesale relocation out of danger and even armoring of the coast).

In this case, given the highly erodable materials at this location, and the low elevation of the site relative to tide levels, it doesn't appear that additional drainage controls and/or additional plantings by themselves would be able to stabilize the bluff to such a degree as to protect against continual wave impacts, overtopping and tidal scour. Thus this alternative alone would be insufficient to protect the North Harbor shoreline within the project area. That said, such measures have a utility in all other alternative project scenarios and should be included in any approval of a project here.

Relocation of Threatened Structures

The only non-shoreline structure alternative capable of protecting the existing waterfront buildings located along the southern shoreline is relocation of the threatened and severely degraded structures an appropriate distance inland of the shoreline. The applicant has actually received approval to relocate building pads for the structures approximately 35 feet landward to move them out of harms way, as well as to increase the base height of the area around the reconstructed building pads above the 100-year flood level, and proposes constructing a public wharf and coastal trail along the shoreline for improved public access and high priority coastal-dependant use of the site. While the County has approved the parking lot improvements, and relocated building pads, and has conditioned any reconstructed buildings to be constructed at the same size and scale as originally on site, demolition of the existing Maloney's restaurant is in the Commissions jurisdiction because most of the restaurant is located on pilings seaward of the mean high tide line.

The historical evaluation of the existing structures conducted by the Department of Parks and Recreation (dated February 2001) have described and identified Maloney's Restaurant as an historic structure, originally built in 1921. The existing building is a one-story wood-frame building, with an irregular floor plan, and a large low-pitched gable roof, which rests on wooden pilings seated into concrete footings located just west of Highway One Bridge, at the mouth of Elkhorn Slough. Originally built as a rectangular building, it was enlarged on three sides in the 1930s, and several small additions were subsequently made to the north and west elevations. In 1997 a front deck was demolished and rebuilt. Exterior walls are clad in shiplap siding, and a continuous band of sash windows is located around portions of the south, east and western perimeter for views of the harbor and slough. Two other small commercial buildings, built in the 1940s are located along the shoreline west of the restaurant, and a one-story wood-frame storage building, constructed in the 1920s to serve as garage and storage unit, is located north west of the restaurant.

According to the historic survey, Maloney's Harbor Inn is the oldest continuously operating restaurant in Moss Landing, as well as the oldest continuously operating business in town, and has played a significant role in the social life of the community. The restaurant has historic ties to the eras of whaling and sardine fisheries on Monterey Bay, and has served as a social center for the Moss Landing area, contributing over the years to a sense of community for the area. It has served as an eating establishment, and gathering place for local residents, fishermen, whalers, cannery employees and visitors throughout its history.

However, while the historical evaluation conducted in February 2001 indicated that "the integrity of the physical structure remains high," more recent engineering reports (dated November 26, 2002 and January 2003) indicate that the restaurant has been damaged by storms, long-term wave action, erosion, building settlement, erosion of supports, rot and age, which has rendered the site unsafe for occupancy, and in imminent danger of collapse. The engineering reports further state that the restaurant cannot be repaired economically, and that it should be immediately removed before further portions of the structure drop into the harbor. Based on these statements, it is not likely that the building could be repaired in its present location unless completely rebuilt. And since the proposed relocation site serves to move the structure beyond wave impact and out of the 100-year flood level, this alternative seems

preferable to reconstructing the restaurant in its existing location.

However, relocation of the existing restaurant and accessory structures alone will not serve to protect the site as a whole, which as described above, has been proposed to serve high-priority costal dependant uses, and thus allowed shoreline protection by the Coastal Act. Therefore, while already part of the project approved by the County, relocation of the existing restaurant and accessory structures does not reduce the need for shoreline protection structure, since the coastal dependant use necessitates that the site as a whole be located adjacent to the water where active shoreline erosion is occurring.

Least Damaging Structural Alternative

The current shoreline in the North Harbor area is basically an erosional scarp that extends about 4 to 6 feet above the mean high tide line, protected in some areas at the toe of the slope by small irregular pieces of concrete and cobbles which are remnants of past fill and bank protection efforts. As described above, significant shoreline erosion has occurred over the past 60 years, and will continue to do so due to wave and tidal energies that impact the shoreline. Because of the high erosion potential of the site, shoreline protection is needed along the North Harbor shoreline in order to protect the coastal dependent uses provided by this area. Coastal Act Section 30233(a), discussed below, requires that any fill allowed to be placed in open coastal waters for new or expanded boating facilities and public recreational piers be the least environmentally damaging alternative feasible.

The project includes the placement of approximately 1,900 cy of riprap revetment along approximately 1,000 linear feet of shoreline, which will cover nearly 0.75 acres of intertidal area, which constitutes fill in open coastal waters. About twenty percent of this area, approximately 0.15 acres (between Sea Harvest and Maloney's restaurants), is already covered by riprap; the project proposes replacing the existing riprap in this area with new riprap more appropriately sized and engineered to protect against tidal scour. The riprap replaced in this area will be located underneath the public wharf, and so will not impact new habitat, or interfere with public access in this area. However, 80 percent of the proposed riprap will be placed north of the public wharf, will occupy 0.60 acres of shoreline area, and will not be visually hidden by any other structures, but will be placed against the shoreline, up to the top of the bluff edge, upon which the shoreline portion of the coastal trail is to be located. Since only 20 percent of the proposed riprap will be replacing existing riprap under the proposed wharf, the project will result in an 80 percent increase over the amount of shoreline revetment that currently exists. Furthermore, as shown in cross sections D and G in Exhibit F, the proposed riprap revetment would extend approximately 20 to 28 feet from the edge of the blufftop, covering much of the intertidal zone in this area (35% of the proposed riprap revetment will be located seaward of the mean high tide line).

Earlier versions of the project included structural shoreline protection elements that have since been removed from the project, including a concrete wharf abutment (which was designed to be located along the landward edge of the wharf that was to extend from the eastern end of the project all the way to the new proposed boat ramp); a sheetpile bulkhead along the seaward edge of the coastal trail between the new and the existing boat ramps, and concrete tidal steps at the north end of the project area, just south of the existing boat ramp, which were to provide access to the intertidal sandbar located in that area. The

applicants have provided no explanation of why these elements were removed from the design, but it may be that these changes were made because of economic constraints.

Wave studies conducted by the project engineers have indicated that there is not a significant difference in the level of shoreline protection provided by riprap revetment as compared to the sheetpile bulkhead proposed in earlier versions of the project. While, the earlier project design using the sheetpile bulkhead still required some riprap shoreline protection to prevent wave erosion and tidal scour at the toe of the bulkhead, the earlier project description required a total of only 705 cy of riprap, less than half the amount currently proposed.

As currently proposed, the physical footprint of the riprap revetment north of the proposed public wharf area will impact existing intertidal habitat, as well as reduce the ability for the public to access the sand and mudflats of the area, and reduce the visual quality of the shoreline by installing riprap visible at all tide levels. In contrast, use of a sheetpile bulkhead, as proposed in the original plans submitted with the project, would occupy a smaller footprint within the intertidal zone, and so result in fewer impacts to habitat, and thus be a less environmentally damaging alternative. With incorporation of stairs or tidal steps, as originally proposed, with handrails, the project would also provide greater, and safer, access to the intertidal sand and mud flats.

As the boat launch requires a concrete ramp placed out into the harbor, it is necessary to prevent tidal scour around this structure, as well as some distance on either side to adequately flank the landward base of the ramp. Since much of the shoreline south of the new boat ramp will include revetment under the wharf, and revetment to protect the boat launch, it is reasonable to extend the revetment between the wharf and the boat ramp, especially since the wharf provides an attractive alternative to shoreline access in this area. However, the shoreline north of the proposed boat ramp is more amenable to intertidal access, especially near the existing boat ramp, thus shoreline protection along this shoreline should be designed in a manner that minimizes riprap and maximizes access to the intertidal area. Therefore, while riprap around the proposed new 4-lane boat ramp and along the shoreline south of the new boat ramp is necessary, use of the sheetpile bulkhead and tidal steps proposed in the earlier version of the project is a feasible, less environmentally damaging alternative compared to the riprap revetment proposed north of the boat ramp.

Therefore, the project has been conditioned to require modification of project plans, for Executive Director review and approval, to include a vinyl or steel sheetpile bulkhead north of the proposed new 4-lane boat launch, with the minimum amount of riprap necessary for toe protection, and to include a stairway or tidal steps for access from the bluff edge to the sandbar south of the existing boat ramp.

Thus as conditioned to require revisions of site plans to incorporate a sheetpile bulkhead along the shoreline north of the proposed boat ramp, and to monitor and mitigate for riprap that may shift over time and extend beyond that area approved by this permit (see below), the proposed project is consistent with Coastal Act Section 30233(a).

Conclusion

The proposed development is required to serve coastal-dependant uses on the site by protecting the North Harbor shoreline, proposed boat launch, new public wharf, wharf access points and gangways for access to transient guest docks. It also serves to protect the North Harbor parking lot area, which provides an integral element for access to and use of the new and existing boat ramps (for auto and boat trailer parking), and new public coastal access (along the new wharf, guest docks and pedestrian coastal trail along the shoreline and across the new wharf), thus supporting coastal dependant use of the site.

Evaluation of feasible project alternatives has found that non-structural alternatives alone will not be sufficient to protect the coastal dependent uses provided by the North Harbor site. Therefore, in this case, a shoreline protection structure must be approved because it is required to serve the coastal dependent uses of the North Harbor site, pursuant to Section 30235.

However, the proposed design, which includes placement of riprap revetment along the entire North Harbor project area shoreline, is not the least damaging structural alternative. Therefore the project has been conditioned to require revisions to the site plan to include a sheetpile bulkhead north of the proposed new 4-lane boat ramp, with the minimum amount of riprap toe protection necessary.

Therefore, only as conditioned, would the project meet the fourth test of Section 30235 of the Coastal Act.

E. Shoreline Sand Supply Impacts

The fifth test of Section 30235 (previously cited) that must be met in order to allow Commission approval is that shoreline structures must be designed to eliminate or mitigate adverse impacts to local shoreline sand supply.

Beach sand material comes to the shoreline from inland areas, carried by rivers and streams; from offshore deposits, carried by waves; and from coastal dunes and bluffs, becoming beach material when the bluffs or dunes lose material due to wave attack, landslides, surface erosion, gullying, et cetera. Coastal dunes are almost entirely beach sand, and wind and wave action often provide an on-going mix and exchange of material between beaches and dunes. Much of the sediment located in the project site and adjacent to the harbor is medium to fine grained fluvial and alluvial materials (sand and silts) that have been transported from the upper Elkhorn Slough and Salinas River watersheds or littoral materials brought into the harbor by longshore currents that wrap around the jetties and drop their load inside the harbor mouth. Some of these materials formed sand bars and spits as a result of streamflow and tidal currents, and other materials have been dredged from the harbor bottom and deposited on site over time. Shoreline retreat and erosion is a natural process that can result from many different factors such as wind, wave and tidal erosion, cave formation and collapse, saturation due to high ground water, and bank sloughing. Erosion of these materials serves as inputs back into the system, where it may be deposited further downstream or down shore. Since most coastal bluffs in California are made of sandy marine terrace deposits, or sandy alluvial and fluvial sediment, bluff retreat is one of several ways that beach quality sand is added to the shoreline. Thus the natural shoreline processes that work to form and retain material on sandy beaches can be significantly altered by the construction of shoreline armoring structures.

The subject site is located within the Moss Landing Harbor, close to the harbor entrance and at the mouth of the Elkhorn slough. As a result of its location, the Harbor serves as a sink (at least temporarily) to both sediments from the upper watersheds and the littoral marine environment. Annual harbor dredging of up to 150,000 cy following El Nino events indicates that sedimentation in the harbor can be quite high following large storm events, when wind and ocean waves also impact the shoreline. Generally, however, dredging during average years requires the removal of usually less than 50,000 cubic yards, which is still a significant amount.

Given that the project proposes to construct shoreline structures to protect the site from erosion, it also reduces the amount of sediment that can enter the system, which when transported into the littoral system, can serve to feed other down-coast beaches. Based on an average erosion rate of 1 foot per year, over a distance of 1,000 linear feet, the volume of sediment retained by shoreline protective structures at the North Harbor site could be estimated to be approximately 111 to 185 cy per year (for a 3 to 5 foot high bluffs). Assuming a sand content of about 20% sand sized material (based on review of core logs provided in the geotechnical report), the shoreline protection against the existing shoreline could retain approximately 22 to 37 cy per year of sand. Assuming the riprap, or some shoreline structure will remain for the life of the site (we can presume for the next 100 years), approximately 220 to 370 cy of sand sized material could be retained by the proposed shoreline structure over the life of the project.

However, the project also requires dredging of approximately 5,000 cy from the harbor bottom for installation of the new boat ramp and north guest dock (dredging from existing surface down to about –9 feet to meet the maintained dredged depth of the North Harbor channel). The applicant has agreed to dispose of sand sized material on an approved beach disposal site located south of the harbor entrance, and finer grained material will be disposed of at the approved offshore site SF-12, consistent with Coastal Act Section 30233(d),. Dredge disposal at these locations will enable the sediment to be put back onto the shoreline, and re-enter the littoral system, and so continue to act as part of the coastal sediment transport process. As the project will likely dispose of from 13 to 22 times more sediment than the proposed riprap shoreline protection would retain, the project more than adequately mitigates for the sediment supply retained by the project.

Encroachment on the Beach

Shoreline protective devices such as the riprap revetment proposed are all physical structures that occupy space. When a shoreline protective device is placed on a beach area, the underlying beach area cannot be used as beach. This generally results in a loss of public access as well as a loss of sand and/or areas from which sand generating materials can be derived. The area where the structure is placed will be altered from the time the protective device is constructed, and the extent or area occupied by the device will remain the same over time, until the structure is removed or moved from its initial location, or in the case of a revetment, as it spreads seaward over time. The beach area located beneath a shoreline protective device, referred to as the encroachment area, is the area of the structure's footprint.

In this case, the riprap revetment would occupy most of the sandy beach located at the toe of the bluff, with 35% of the proposed riprap below mean high tide, and 65% occupying the remaining shoreline

above mean high tide. The shoreline along the south end of the project site, between the existing Maloney's Harbor Inn and the new Sea Harvest (formerly Skipper's) restaurants is already occupied by riprap, so that no sandy beach or intertidal area exists. However, along the western shore between the Sea Harvest Restaurant and the existing 2-lane boat ramp located at the north end of the project area, sand flats exist. A large intertidal sandbar is also located just south of the 2-lane boat ramp, which allows folks to get down to the water for some inner harbor beach access.

Emplacement of the riprap shoreline protection will extend approximately 20 to 28 feet out from the shoreline along the 1,000 linear foot of shoreline. Since approximately 400 linear feet of shoreline are already occupied with existing riprap, the project proposes only replacing the existing riprap with better, more appropriately sized material, and will not encroach onto uncovered sandy beach. However, for the remaining distance of approximately 600 feet, the proposed shoreline revetment will result in an encroachment area of approximately 12,000 to nearly 17,000 square feet. Encroachment of the revetment along the western shoreline will basically occupy all of the narrow sandy beach in this area, make it more difficult to reach what sandy beach might remain south of the existing 2-lane boat ramp, and will further retain sand that would otherwise have been able to interact with the natural shoreline processes.

However, as conditioned to incorporate use of a sheetpile bulkhead north of the proposed 4-lane boat ramp, with the minimum amount of riprap necessary to protect the toe of the bulkhead, encroachment on the beach will be minimized.

Retention of Potential Beach Material

If natural erosion were allowed to continue (absent the proposed armoring), some amount of beach material would be added to natural sediment transport system and larger littoral system from the North Harbor shoreline. The volume of total material that would have gone into the sand supply system over the lifetime of the shoreline structure would be the volume of material that would have come from bluff erosion, and material that would have come from the beach at the toe of the bluff. While we have no data to indicate the average loss of beach sand (eg., long-term or annual beach elevation profile), we know it will be somewhat more than the 270 to 300 cy calculated for bluff erosion. If as much as 1 foot of beach sediment would have been exchanged over the encroachment area, the result would be approximately 400 cy retained, for an estimated total of between 670 and 700 cy.

By requiring that site plans be revised to include a sheetpile bulkhead north of the proposed new 4-lane boat ramp, with a minimum of riprap for toe protection, the amount of beach sediment retained by the project would be significantly less. In either case, as described above, since the amount of material being dredged from the harbor bottom for the new boat ramp and proposed north guest dock is still over 7 times greater than the amount retained by the project, it adequately mitigates for sediment retained by the riprap revetment.

Sand Supply Impacts Conclusion

As detailed above, the harbor dredging proposed as part of the project adequately mitigates for impacts of the project, which has therefore been found consistent with the fifth and final test of Section 30235,

and is thus consistent to the degree feasible with this Section of the Coastal Act.

F. Long Term Structural Stability and Assumption of Risk

Pursuant to Coastal Act Section 30253 (previously sited), development is to be designed, sited, and built so that it neither creates nor contributes significantly to erosion, geologic instability or destruction of the site or surrounding area, and to allow for natural shoreline processes to occur without creating a need for additional more substantive armoring. Coastal development permittees for new shorefront development thus are essentially making a commitment to the public (through the approved action of the Commission, and its local government counterparts) that, in return for building their project, the public will not lose public beach access, sand supply, ESHA, visual resources, and natural landforms, and that the public will not be held responsible for any future stability problems. Coastal Act Section 30253 requires that the proposed project assure structural stability without the need for additional armoring. The project has been designed by professional coastal engineers with experience in coastal armoring projects, who have indicated that the design life of the project is 100 years.

Geologic Stability

The geologic setting of the Moss Landing Harbor is described in the final EIR for the Moss Landing Harbor Master Plan (1987), as well as the geotechnical report (Geotechnical and Coastal Engineering Study for Shorefront Improvements, Moss Landing North Harbor) prepared for the project by Haro, Kasunich and Associates (June, 1998). Surficial geology in the Moss Landing Harbor area consists of sands, silts, and clays with interbedded gravels deposited in marine/estuarine, fluvial, and dune environments. Sediment accumulations in the Harbor are from four sources: littoral transport, watershed runoff, aeolian (wind-transported) sands, and erosion of the shoreline inside the Harbor. Past dredging in the Harbor has found that bottom sediments are generally composed of sands in the entrance channel and areas closest to the channel, and grade to silts and clays in both the north and south ends of the Harbor.

The existing geotechnical report was conducted for the earlier design that included the sheetpile bulkhead and concrete wharf abutment, and no recent geotechnical evaluation of the revised plan using riprap revetment has been conducted. The earlier geotechnical and coastal engineering study, therefore can be used to summarize the geologic and seismic hazards that may affect the project but will need to be updated to evaluate the project as it is now proposed. Geologic and seismic hazards identified by the geotechnical report include the following:

1. The site will be subject to at least one major earthquake during the life of the structure, so the bulkhead, restaurants, and any other structures proposed at the site must be designed in accordance with the most current Uniform Building Code recommendations. (Design earthquake for the project area is a moment magnitude 7.9 event (the maximum credible earthquake) on the San Andreas Fault located 11 miles away. The peak ground acceleration for the project site is estimated to be 0.48g.)

2. Some of the subsurface soil layers can liquefy during a large seismic event; liquefaction is likely from near the surface to a depth of approximately 40 feet below the existing ground surface, and

can cause loss of bearing support of the building foundations, and compaction settlement. Potential mitigation measures include in situ densification (i.e., grouting) of liquefiable materials, embedding foundations below potentially liquefiable soil layers, a stiffened foundation system founded on a compacted earthen mat, which could be designed to be re-leveled in the future if necessary.

3. Significant erosion has occurred at the site from surface runoff over the adjacent banks and from tidal waters and wave impact. Up to 25 to 35 feet of bank has eroded over the past 46 years in the center of the project area; fill has historically been placed along the banks to mitigate past erosion.

4. Scour in the channel south of the project site (the Elkhorn Slough main channel) has been occurring at an increasing rate over the last 50 years; amount of sour along the southern shoreline may become as great as it is now in the central portion of the channel (about –25 feet NGVD).

5. The site is subject to impact from refracted ocean waves; and the site will continue to be subject to inundation during major storm events and may experience a small amount of overtopping unless it is raised above the flood level and adequate shoreline protection is provided.

Conclusions of the geotechnical report were that the project site could be improved providing the geologic hazards identified in the report were properly mitigated, based on the shoreline protection proposed at the time (sheetpile bulkhead and concrete wharf abutment). As described above, the project now includes different components to protect the site from shoreline erosion; therefore, the geotechnical report will need to be updated to evaluate the components now being proposed, and any additional geotechnical recommendations and mitigation measures submitted to the Executive Director for review and approval before their incorporation into the project.

As approved by the County, the parking lot, and building pads will be raised approximately 3 feet (using compacted fill) to raise the base elevation of the project area above the 100-year flood elevation. And as currently designed, the wharf and its structural supports (pilings and cross braces) will be constructed so that the elevation of the wharf deck and public access points will be similar to the base elevation of the project area above the 100-year flood elevation.

Air quality

With regards to protecting air quality, the Monterey Bay Unified Air Pollution Control District generally conditions activities that have the potential for affecting air quality based on fuel usage and emissions. The permittee will be required to obtain a permit from the MBUAPCD for operation of heavy equipment, or evidence that no permit is required prior to any demolition or construction activities. The permit may require the Harbor District to limit the hours of operation and conform to noise and exhaust requirements. Therefore, as conditioned to require conformance with MBUAPCD requirements, the proposed development is consistent with Coastal Act Section 30253(3) as it pertains to air pollution.

Assumption of Risk

The experience of the Commission in evaluating the consistency of proposed developments with Coastal Act policies regarding development in areas subject to problems associated with geologic instability, flood, wave, or erosion hazard, has been that development has continued to occur despite periodic episodes of heavy storm damage, landslides, or other such occurrences. Oceanfront development is susceptible to bluff retreat and erosion damage due to storm waves and storm surge conditions. Past occurrences statewide have resulted in public costs (through low interest loans, grants, subsidies, direct assistance, etc.) in the millions of dollars. As a means of allowing continued development in areas subject to these hazards while avoiding placing the economic burden on the People of the State for damages, the Commission has regularly required that Applicants acknowledge site geologic risks and agree to waive any claims of liability on the part of the Commission for allowing the development to proceed.

There are inherent risks associated with development on and around eroding bluffs in a dynamic coastal environment; this applies to the project proposed as well as for the development to be located landward of the shoreline. The proposed revetment along the North Harbor shoreline, and all development inland of it, still has the potential to be affected by shoreline erosion in the future.

Although the Commission has sought to minimize the risks associated with the development proposed in this application, the risks cannot be eliminated entirely. Given that the Applicant has chosen to pursue the development despite these risks, the Applicant must assume these risks. Accordingly, this approval is conditioned for the Applicant to assume all risks for developing at this location (see Special Condition 16).

No Seaward Encroachment

Coastal Act Section 30253 requires that the shoreline protective structures not create the need for additional more substantive armoring in the future. Such potential future armoring could include seaward encroachment of riprap that would give rise to another level of potential Coastal Act inconsistency inasmuch as it would occupy additional recreational sandy beach and increase the amount of armoring within the beach area public viewshed. Further, to allow a project that would require additional armoring seaward of any approved revetment would not be consistent with Section 30253 because stability and structural integrity must be assured without reliance on future armoring. Therefore, to protect the beach area seaward and channel ward of the seawall consistent with the Coastal Act, and in order to find this project consistent with Coastal Act Section 30253 requiring that development not require additional armoring in the future, the Commission finds that no further seaward encroachment is allowed in the future (see special condition 15).

Monitoring, Maintenance, and Long-Term Stability

Although riprap revetment has the potential to sink or move down slope due to gravity and removal of interstitial sediment due to hydrologic and hydrostatic forces, based on its engineered design and use of a keyway at the toe of the revetment, it is expected that this shoreline revetment will continue to provide shoreline protection throughout its design life as long as monitoring and maintenance activities are

undertaken when necessary to ensure that the riprap remains in its present location, and amend or repair it as necessary. Therefore, the applicant has been required to develop a plan for long-term monitoring and maintenance of the riprap shoreline protection to insure that it remains in the original footprint, and that it continues to function effectively (see Condition 13).

Furthermore, unless the coastal trail atop the bluff is to be paved, the upper bluff soils must be stabilized with vegetation appropriate for the site, and that upper bluff drainage is controlled to ensure overall stability of the bluff edge. Long-rooted non-invasive native plant species suited for the site should be used for this purpose. In a bluff setting, these species can help to stabilize bluff soils, minimize irrigation of the bluff (again helping to stabilize the bluff), and can help to avoid bluff failure. They also create a more natural looking landform, which can help to offset the visual impacts of the riprap revetment (see also visual findings below).

Finally, in order to find the proposed project consistent with the Coastal Act, the Commission finds that the condition of the riprap shoreline protection, and bluff plantings, in their approved state must be maintained for the life of the structure. Further, in order to ensure that the Permittee and the Commission know when repairs or maintenance are required, the Permittee must monitor the condition of the riprap revetment over the long term. The monitoring will ensure that the Permittee and the Commission are aware of any damage and can determine whether repairs or other actions are necessary to maintain the shoreline protection structure in its approved state before such repairs or actions are undertaken. Finally, such future monitoring and maintenance activities must be understood in relation to clear as-built plans.

Therefore, special conditions are attached to this approval for the submittal of as-built plans (to define the footprint and profile of the permitted structures) with surveyed reference points to assist in evaluation of future proposals at this site (see special condition 10) and drainage and non-invasive native vegetation parameters for the bluff area (see special condition 3). For monitoring, the Applicant is responsible for ensuring adequate monitoring of the riprap revetment and is required to submit a monitoring report on five year intervals that evaluates the condition and performance of the revetment, and related drainage and vegetation elements, and to submit the report with recommendations, if any, for necessary maintenance, repair, changes or modifications to the project (see special condition 11). All monitoring and maintenance commitments must be recorded as property restrictions to ensure long-term compliance, and to ensure that any future landowners are clearly notified of these commitments (see special condition 16).

Potential Off-site Impacts and Future Shoreline Management

Oftentimes there are also concerns that installing shoreline armoring where other adjacent or nearby properties are not armored may cause increased erosion due by “end-effects” or from increased reflected wave energies can lead to structural stability issues off-site. Unprotected areas exist north of the site, between the existing boat ramp and the Elkhorn Yacht Club (which uses a vertical sheetpile bulkhead along its shoreline) and on the opposite shore on the west side of the harbor.

The western shore of the north Harbor area is owned by State Parks as part of the Moss Landing State Beach. In recent years, this western shoreline has experienced accelerated erosion and some of the existing Park facilities have been threatened by shoreline retreat. The changes to the eastern portion of the North Harbor may alter the sediment transport and hydrodynamic conditions in the north harbor area. There has been no study of how the proposed North Harbor improvements could alter conditions along the shoreline of the State Parks property on the opposite shore. Thus, Special Condition 14 encourages MLHD to actively participate in any current or proposed studies and surveys that would examine shoreline change, sediment transport or harbor hydrodynamics. The Condition does not present options for mitigation if the harbor improvements are found to exacerbate the existing erosive conditions on the western shore; without an understanding of the causes for the accelerated erosion and possible methods to reduce or change these impacts, it is premature to consider mitigation options that could be undertaken by MLHD. However, it is important that the Harbor District understand the potential impacts its activities might have on other unprotected portions of the harbor shoreline, take some responsibility if such impacts do occur, and participate in finding solutions amenable to the affected parties.

Conclusion

As conditioned for final engineered plans (that can be peer-reviewed by the Commission's coastal engineer), updated geotechnical review, recommendations and mitigation measures, long-term monitoring and maintenance to ensure the permitted structure remains effective and in its approved location, a prohibition on additional armoring seaward of the approved revetment, and for the Applicant to assume all risk and responsibility for development at this shoreline location, and as discussed above, the proposed project is consistent with Coastal Act Section 30253.

F. Geologic Conditions and Hazards Conclusion

As discussed above, the facts of this particular case show that the proposed project is required to protect existing structures in danger from erosion and that, with incorporation of a sheetpile bulkhead and the minimum riprap necessary for toe protection, is the least environmentally damaging, feasible alternative. The proposed project has been designed to minimize (to the extent feasible) sand supply impacts, and adequately mitigates impacts to sand supply by placing dredge material removed from the new boat ramp and north guest dock areas either onto the beach or back into the littoral system. Special conditions have been applied for monitoring, long-term maintenance, prohibition on future seaward or channel encroachment, and assumption of risk. As conditioned, the proposed project can be found consistent with Coastal Act Sections 30235 and 30253 as discussed in this finding.

2b. Marine Resources and Environmentally Sensitive Habitats

a. Issue

The project involves construction, demolition, and dredging activities that may adversely impact environmentally sensitive habitat areas and other marine resources, as well as adversely affect water quality.

The project involves the demolition of existing structures in and over open coastal waters. It also includes both dredging and fill in open coastal waters to construct the new and expanded recreational boating facilities and public recreational facilities proposed which involve emplacement of up to 206 steel or concrete pilings (175 for wharf + 12 for north transient docks + 10 for south transient docks + 9 for boat launch floats), 1,900 cy of riprap along 1,000 linear feet of shoreline, approximately 5,000 cy of dredging for new berthing areas, and approximately 2,010 cy of fill (including 410 cy of concrete) for the new boat ramp.

b. Relevant Regulatory Policies

Coastal Act Sections 30230 and 30231 require that:

> ***Section 30230.*** *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*
>
> ***Section 30231.*** *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Coastal Act Section 30240 and 30255 require that:

> ***Section 30240(a).*** *Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*
>
> ***Section 30240(b).*** *Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*
>
> ***Section 30255.*** *Coastal-dependent developments shall have priority over other developments on or near the shoreline. Except as provided elsewhere in this division, coastal-dependent developments shall not be sited in a wetland ….*

Coastal Act Section 30233 provides in part that:

> ***Section 30233.***

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(l)…

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

…(4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities

(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems.

…(e) Erosion control and flood control facilities constructed on water courses can impede the movement of sediment and nutrients which would otherwise be carried by storm runoff into coastal waters. To facilitate the continued delivery of these sediments to the littoral zone, whenever feasible, the material removed from these facilities may be placed at appropriate points on the shoreline in accordance with other applicable provisions of this division, where feasible mitigation measures have been provided to minimize adverse environmental effects. Aspects that shall be considered before issuing a coastal development permit for such purposes are the method of placement, time of year of placement, and sensitivity of the placement area.

c. Analysis of Marine Resources and Environmentally Sensitive Habitats

The Moss Landing Harbor provides the vital link between the tidal waters of Monterey Bay and Elkhorn Slough. Marine mammals, fish and seabirds make use of both the aquatic and terrestrial environments provided within the Harbor, the Slough and the Bay. While harbor seals and sea otters make their way through the Harbor to established haul-outs in Elkhorn Slough, they have been observed hauling out on the North Harbor sand bar as well. Pelicans and other shorebirds have also been observed resting or foraging on the sand bar. The tidal marsh and mudflats that fringe the North Harbor area also serve as resting and foraging grounds for harbor seals, sea otters, and various shorebirds. Some of the more consolidated mudflats in the North Harbor near the confluence with Elkhorn Slough support remnant eelgrass beds (ABA Consultants, 1998), and clam beds. Environmentally sensitive habitats existing within the project area include the waters of the Monterey Bay and Elkhorn Slough, and the tidal flats, eelgrass beds, sandy beaches and dune areas in and adjacent to the Harbor.

While the south harbor area has been heavily used by commercial and recreational boaters since the opening of the harbor in the mid 1940's, and has lost much of the fringing salt marsh, and benthic

environments that once existed, the North Harbor has had relatively little development over the same time period, and so has retained at least some of the natural habitats that existed on the site prior to opening of the Harbor entrance channel, and introduction of increased tidal currents that now flow in and out of Elkhorn Slough.

The most significant habitat values of the North Harbor involve large areas of tidal mud and sand flats (Onuf et al, 1978, Oliver 1997), which are remnants of tide flats that were present before the Harbor opened. Historically, these flats extended from the old mouth of the Salinas River (near west Bennett Slough) to the present mouth of Elkhorn Slough (Oliver, 1997; see Exhibit B). These tide flats, comprised of sand, muddy sand or sandy mud, house a dense and diverse community of benthic invertebrates and are important feeding and roosting habitats for shorebirds, seabirds, and marine mammals.

Birds and Marine Mammals. Ramer (1989) conducted bird surveys in the North Harbor as part of the EIR for the North Harbor Expansion, and found three species nesting in the North Harbor: Snowy Plovers, Killdeer and Western Gulls. She also noted that the North Harbor area is used by several endangered or sensitive species including the snowy plover (*Charadrius alexandrinus nivosus*), California brown pelican (*Pelecanus occidentalis* californicus), California clapper rail (*Rallus longirostris obsoletus*) and California least tern (*Sterna antillarum browni*). Oliver (1997) notes that while the salt ponds in the nearby Moss Landing Wildlife Area are the major resting habitat for Brown Pelicans in central California, the sand flats on the southwest side of the North Harbor serve as a secondary resting area when human activities disturb bird use in the salt ponds. Ramer (1989) surveyed about 50 individual Brown Pelicans resting on the sand flats of the North Harbor on one day during a survey in April 1989. Hundreds of individuals rest on the sand flats during the late summer and fall, when they are most abundant in the area (Jaques and Anderson, 1988, Oliver 1997).

Marine mammals that have been found in the Harbor include the California sea lion (*Zalophus californianus*), Pacific harbor seals (*Phoco vitulina*) and the threatened California sea otter (*Enhydra lutris*). Oliver, 1997, states that Harbor seals are common throughout the mouth of Elkhorn Slough, and reports seeing as many as 10 harbor seals swimming in the North Harbor area. Sea otters have also been found in the Elkhorn Slough area since the mid 1970's (Kvitek and Oliver 1987), and feed on clams, fat innkeeper worms and other larger invertebrates throughout the mouth of Elkhorn Slough (Kvitek et al, 1988). As described previously, sea otters and seals have been seen hauled out on the North Harbor sand bar. The North Harbor sand bar is located on the western shoreline of the North Harbor, formed by the tidal reworking of sandy sediment and aeolian deposition of dune sands that blow over the dune crest along Moss Landing State Beach.

Since the North Harbor sand bar serves as an important haul out and roosting site for seals, sea otters and California pelicans, ongoing Harbor maintenance dredging activities are currently required to minimize impacts to this area, and prevent harassment of these animals. Because the North Harbor sand bar is located so close to the project site, and the animals that make use of the North Harbor sand bar site also frequent the current project site, the project has also been conditioned to prevent harassment of these animals as well.

Therefore, the project has been conditioned to, the immediate project area will be inspected daily by the environmental monitor to ensure that southern sea otters and brown pelicans are not within 50 meters of the dredge equipment. The environmental monitor will have the authority to halt any action that might result in injury or mortality of such wildlife, and will have the authority to employ non-invasive methods to discourage such animals from the area (such as use of hand waving, hand clapping, herding boards, or water hoses).

Therefore, to ensure that the project will avoid impacts to sensitive birds and marine mammals, the project has been conditioned to require daily inspections of the immediate project area by an authorized environmental monitor to ensure that southern sea otters and brown pelicans are not within 50 meters of any construction, demolition or dredge equipment. The environmental monitor will have the authority to halt any action that might result in injury or mortality of such wildlife, and will have the authority to employ non-invasive methods to discourage such animals from the area using methods approved by CDFG and USFWS (e.g., using hand waving, hand clapping, herding boards or water hoses). The project has also been conditioned to require pre-construction surveys for snowy plovers, and the design and implementation of a mitigation plan should any snowy plovers be found within the North Harbor project area.

Benthic Invertebrates. Benthic fauna may be impacted (dislodged and transported) during piling emplacement and the dredging and disposal activities proposed. However, since natural disturbance of the harbor bottom is high and benthic fauna are generally considered to be sparse and transitory in nature due to the frequent flushing events that occur in the harbor and in the vicinity of the offshore disposal sites, these species would not be significantly adversely affected by these activities. Most benthic invertebrates are able to adapt to such changes due to their ability to migrate to suitable depths and bottom habitats.

However, installation of the boat ramp and north transient docks will require dredging of bottom sediments north and west of the new Sea Harvest (formerly Skipper's) restaurant. This area has been considered by some to have significant clam beds that have historically supported recreational clamming activities and that serve as a food source for the endangered California sea otter (pers comm.. Deborah Johnston, CDFG). While clam beds themselves are not considered sensitive habitat areas, clams are one of the main food sources for the endangered sea otter, and so are considered a valued resource. Dredging of the North Harbor navigation channel has been approved and conducted in the past under numerous dredging permits previously approved by the Coastal Commission. This project, however proposes two new dredge areas that have not been previously approved or sampled. Since the extent and density of the clam beds in this area is uncertain, dredging in this area should not occur until adequate information is provided to indicate that these clam beds would not be adversely affected by dredging. Discussion with CDFG staff (pers comm.. Jeff Cann, CDFG) has indicated that relocation of any clam beds found in the proposed dredge areas to other suitable areas in the North Harbor would be adequate mitigation for protecting this resource. Therefore, this permit has been conditioned to require a biological survey of any new dredge area, and if clam beds are located within any of the dredge areas, the permittee must develop and implement a mitigation plan, in coordination with CDFG to deal with

the removal and relocation of clams and other benthic macrofauna found in these areas to other suitable sites within the North Harbor.

Eelgrass Beds. As shown on site plans, four eelgrass beds are located in the vicinity of the proposed wharf, along the southern shoreline between the new Sea Harvest (formerly Skipper's) Restaurant and Maloney's Harbor Inn (see Exhibit F). Eelgrass (Zostera marina) is a marine plant that grows in clear, well-lit, shallow coastal waters and provides shelter and spawning habitat for fish and invertebrates. Because of its special requirements, limited range of adequate growing conditions in most coastal areas and susceptibility to damage due to human disturbance (from direct and indirect impacts), eelgrass beds are considered to be environmentally sensitive habitat areas. Additionally, the eelgrass beds in the project vicinity are located in the area between the proposed new wharf and south transient dock, and so could potentially be impacted by construction activities, boating use of the space between the dock and the wharf, and/or by the shading of sunlight created by the wharf and dock.

In response to concerns from Commission staff and others that the project had the potential to adversely impact the eelgrass beds, the wharf design was modified to minimize shading of the eelgrass beds, and the south transient dock was located completely out of the footprint of the eelgrass beds. However as shown on the preliminary plans, a small portion of the wharf is still shown to overhang a portion of the eelgrass beds. While the applicant has provided an evaluation of shading effects caused by the proposed wharf, Coastal Act policy 30233, which allows fill for structural pilings for public recreational piers that provide public access and recreational opportunities, requires that such projects be the least environmentally damaging alternative. Since the wharf can be designed in a way that avoids shading of the eelgrass beds, the proposed design is not the least environmentally damaging alternative. Additionally, Section 30240(b) requires that development adjacent to sensitive habitat areas prevent impacts that would significantly degrade those areas. Therefore, the project has been conditioned to require that the wharf and all activities necessary for construction of the wharf and the south transient dock avoid all areas of eelgrass.

Additionally, monitoring and mitigation measures detailed in the eelgrass monitoring plan developed by Harding ESE (consultants for the Harbor District), in conjunction with the California Department of Fish and Game have been incorporated into this permit by reference. The Environmental Assessment/Initial Study/Mitigated Negative Declaration adopted by the Harbor District found that with the mitigation measures proposed in the eelgrass mitigation monitoring plan, the project would have no significant impacts on the eelgrass beds. The mitigation plan, also incorporated into the County's approval of the project, requires pre- and post-construction surveys of the eelgrass bed location, density and extents to address potential impacts from the wharf. If monitoring efforts reveal that the eelgrass beds are being impacted specifically as a result of project implementation, additional mitigation measures will be prepared in coordination with USFWS and CDFG. Such measures may require planting additional plots of eelgrass in locations determined to be suitable for their growth.

Potential impacts related to boat traffic could include disturbance caused by a boat's physical contact with eelgrass beds, damage to eelgrass beds from propeller drag, or increased turbidity caused by propeller wash and turbulence of the seabed. To avoid such impacts, the mitigation monitoring plan

indicates that the Harbor District will physically mark off boundaries of the eelgrass beds using floating buoys anchored to the seabed, and install signage on the floating markers to warn about and restrict access to the eelgrass bed area, and will limit the use of the northern side of the south transient dock to small, non-motorized boats. Additional, future mitigation measures could include the construction of permanent physical barriers to prohibit all boat entry into the area between the south dock and the shoreline.

Construction Activities. Most construction activities will be conducted from shore, using heavy equipment. However, some piling emplacement, piling removal and construction activities may be conducted from a floating barge located adjacent to the site. Similarly, dredging activities, discussed in detail below, will be conducted from a floating barge, and dredge pipelines may be located along the Harbor bottom, tidal mud flats, fringing tidal marsh, and dune and beach habitats during dredging and beach renourishment operations. Therefore, pursuant to Coastal Act Section 30240(a) and 30240(b), and as required in the current dredge permit, the location of construction equipment and dredge pipelines must be designed to avoid and minimize impacts to these environments (while minimizing their potential obstruction to navigation within the Harbor).

d. Conclusion for Marine Resources and Environmentally Sensitive Habitats

As designed and conditioned to avoid impacts to the tidal mudflats, eelgrass beds and clam beds, and to minimize disturbance of resident wildlife no significant disruption of environmentally sensitive habitat will result. With the inclusion of mitigation measures designed to prevent adverse impacts from construction activities, and to protect environmentally sensitive habitats and resources of the marine environment, the project does conform to the environmentally sensitive habitat and biological resource protection requirements of Coastal Act Sections 30230, 30231, and 30240.

2c. Dredging and Fill of Open Coastal Waters

Section 30233 of the Coastal Act allows for the dredging and fill of open coastal waters for new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities. The Coastal Act allows such activities where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects. It also specifies that dredge spoils suitable for beach replenishment may be placed at appropriate points on the shoreline and back into suitable long shore current systems where suitable mitigation measure have been provided to minimize adverse environmental effects.

As described above, the project involves both dredging and fill in open coastal waters to construct new and expanded recreational boating facilities and public recreational facilities, which include the public wharf and pedestrian promenade, new boat launch, and transient guest docks. The project proposes dredging a total of up to 5,000 cy of harbor bottom sediments in the area around the new boat ramp and north transient guest dock. The project also involves emplacement of up to 206 steel or concrete pilings (filling approximately 412 square feet of sub- and intertidal habitat), 1,900 cy of riprap covering approximately 20,000 square feet of shoreline, and approximately 2,010 cy of fill (including 410 cy of

concrete) for the new boat ramp, which will occupy approximately 4,500 square feet of sub- and intertidal habitat. As the project provides new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities, dredging and fill for such use is allowed under the Coastal Act Section 30233(a)(4).

With regards to dredging, the Harbor District currently has a long-term dredging permit (CDP 3-01-049) in force that allows dredging of uncontaminated sediments from established dredge areas, which currently do not include the dredge areas proposed by this project. CDP 3-01-049 allows dredging and disposal of suitable material at approved dredge disposal locations along the Moss landing Sate Beach, and at offshore locations SF-12 and SF-14 in the Monterey Bay. Under the existing long term dredge permit, dredging is conducted using a floating barge, with cutter-head suction dredge and a series of floating and submerged pipelines that take dredge slurry either out to SF-12, or to an approved beach renourishment area located along the north or south spit beach.

As described in the current dredging permit, the USEPA (in correspondence to the USACOE dated 3/31/99) states that the Monterey Bay National Marine Sanctuary is a "special aquatic site" under the 404(b)(1) guidelines and has also "determined that the Monterey Bay National Marine Sanctuary, specifically including the Monterey Canyon and the area in the vicinity of the designated dredged material disposal sites SF-12 and SF-14, is an Aquatic Resource of National Importance (ARNI)." These special status determinations require upland disposal for any "…unsuitable material currently present in the federal channel (as well as the adjacent berths)." As the approved upland rehandling site used previously is no longer available for dredging of potentially unsuitable materials, only materials found suitable for unconfined aquatic disposal or beach renourishment is currently allowed under CDP 3-01-049.

Since the subject project includes two new dredging areas, this permit allows one-time dredging for the two areas proposed (new boat ramp and north guest dock area). However since little previous sediment sampling has been conducted in these two areas, the permit has been conditioned to require biological surveys, with development of mitigation plans if any biologically significant resources are found prior to dredging, and to conduct dredging consistent with the current dredging permit, which requires sediment sampling and a dredge disposal site suitability determination prior to any dredging. As described above, the current dredging permit, and thus this permit as well, allows dredging of suitable (uncontaminated) materials only. While contaminated materials have been found in the south harbor (near the Sandholdt bridge, where agricultural sediments first enter the harbor, and near Gravelle's boat yard, where contaminants associated with heavy metals and solvents used for boat repair and bottom paint have been found), sediments dredged from the harbor mouth and North Harbor area have always been found suitable for beach nourishment or offshore disposal. Therefore, we would expect that to still be the case for these two new North Harbor dredge areas, but we must condition the permit accordingly, in case contaminated sediments are unexpectedly found in this area.

Staff from the Coastal Commission and other resource management agencies have also worked with the applicant over the past four years to assure that the project is the least environmentally damaging alternative. The north transient guest dock was also redesigned from that originally proposed, in order

to reduce the amount of dredging necessary and modifications were made to previous plans to locate the wharf, boat ramp, and shoreline protection in such a way as to minimize impacts to sub-tidal habitats and minimize necessary fill. As shown on project plans, most of the shoreline revetment has been located above the mean high tide line and only a portion of the proposed riprap will be located below mean high tide line. Additionally, since the project does not involve increasing the existing revetment footprint along the southern shoreline in the vicinity of the existing Maloney's Harbor Inn and Sea Harvest (formerly Skipper's) restaurants, but rather replacing what is there with more appropriately sized material, with a keyed design to keep it in place, the project is less environmentally damaging than a larger, whole new revetment would be. Additionally, as described above, while the project originally contained a sheetpile bulkhead and concrete wharf abutment, which would have occupied a smaller footprint, it also required additional riprap revetment along the toe to prevent wave erosion and tidal scour, so would likely have had a similar footprint. The only other feature of the project that requires fill is the boat ramp, which is a necessary element to allow trailer-able boats access to coastal waters. The boat ramp and docks have been designed and located in areas where they will have the least environmental impact. The earlier version of the project also included tidal steps, which are no longer included

In order to keep the footprint to the minimum required, Special Condition 1(c) requires that the final plans for the harbor development follow the footprint established by the preliminary site plans prepared by Moffatt & Nichol, dated May 12, 2004, as modified by Special Condition 1(a). Changes from the plan or cross sections presented in the preliminary plans must be fully documented, supported by engineering calculations, and the environmental consequences of these modifications must be analyzed and compared with the impacts that would be expected to result from the Preliminary Plan.

The boat ramp still requires fill to allow access to tidal waters, including the installation of concrete for the ramp surface, but again, this element has been located outside of any eelgrass beds in an area where it will have the least environmental impact, and as described above, the project includes adequate mitigation monitoring to ensure protection of marine resources. Since the project as designed and conditioned by this permit will not cause significant adverse impacts to eelgrass beds, clam beds, or marine mammals, and does not include any structures that would significantly effect tidal circulation in the North Harbor, it will not effect the functional capacity of the harbor or estuarine system, and so is consistent with Coastal Act Section 30233(c).

Continued sediment deposition in and around the new boat ramp and transient guest docks can affect the ability to navigate safely in and out of these areas. Continued sediment deposition can be anticipated due the geographic location of the harbor, and its function as a sink for sediment that drains from the Salinas River and Elkhorn Slough watersheds. Even with a comprehensive management plan in place to minimize erosion in the watershed, continued dredging would be required and no feasible alternatives to long-term maintenance dredging have been identified. Therefore, this project also requires the permittee to incorporate the additional dredge areas that are part of this project onto an authorized maintenance dredge area map, and to conduct future dredging in conformance with the long-term dredging permit in force at that time.

Because the project involves construction of new and expanded recreational boating facilities which is allowable under the Coastal Act; there are no feasible less environmentally damaging alternatives available to construct such facilities in the North Harbor area; feasible mitigation measures are provided to minimize adverse environmental effects; dredging will be conducted in conformance with an coastal development permit already approved for such activities, and suitable sediments will be conveyed to appropriate beach replenishment sites, the Commission finds that the proposed project is consistent with Coastal Act Sections 30230 through 30233 described above.

2d. Water Quality

Inputs to the harbor that have the potential to impact water quality include sedimentation and non-point source runoff from the Salinas River, Old Salinas River Channel, Tembladero Slough, and Elkhorn Slough watersheds, sloughing of harbor bank sediments, littoral sands entering the harbor mouth, and by-products of boating and industrial uses in and adjacent to the harbor.

Sediment sampling and testing conducted in Moss Landing Harbor in the past (summarized in Exhibit J), indicates that sediments in the harbor bottom include heavy metals (including arsenic, copper, nickel, cadmium, chromium and mercury), pesticides (including DDT, chlordane, dieldrin, endrin), PCBs (aroclor), and tributiltin at levels that exceed environmentally safe limits. Additionally, recent solid phase bioassay tests of dredged sediments have generally shown significantly reduced survival rates for test species. While some areas of the South Harbor have tested poorly (contaminated sediments have been found near Sandholdt Road Bridge, Gravelle's Boatyard, and portions of the South Harbor main navigation channel), areas near the harbor entrance, Elkhorn Slough main channel and North Harbor area have generally tested clean (see Table 1). Therefore, it is expected that clean sediments will be found in the proposed dredging areas around the new boat ramp and north transient docks.

As discussed above, the permit has been conditioned so that any necessary dredging will be conducted in conformance with the current dredge permit currently in force, which requires sediment sampling and site suitability determination prior to any dredging, and allows only dredging of uncontaminated dredge materials. Similarly, the permit has been conditioned so that future maintenance dredging will need to be approved under a separate permit or as an amendment to the long-term monitoring permit currently in force at the time.

Additional water quality concerns are those associated with demolition of existing waterfront structures (abandoned Maloney's Harbor Inn and adjacent building), piling emplacement and construction of the new boating facilities. Since the project requires work in, over, and adjacent to open coastal waters, which could lead to potential adverse water quality impacts from sediment erosion construction debris, and potential spills, it has been conditioned to include implementation of best management practices that avoid or minimize any unpermitted discharge of liquids or construction materials into the harbor. Construction staging and storage areas must be located and managed in such a way so that project activities will not adversely impact water quality. Additionally, conditions have been placed to avoid the potential spillage of concrete into marine waters and to prohibit the use of creosote treated wooden pilings. Since the project site commonly experiences active sediment movement due to strong diurnal

tidal currents, silt curtains are not required, however, containment booms or other in-water methods for containing construction activities and solid waste discharge that may occur are required. As project construction will be of limited duration, and construction methods have been conditioned by this permit to require use of best management practices to avoid oil spills and construction materials from entering the water, the project is not expected to adversely affect any other aquatic or marine mammal species.

Additionally, the County's approval of upland portions of the project includes incorporation of mitigation measures identified in the approved mitigated negative declaration, adopted as part of the project, that provide improvements to the existing drainage system on-site, including the addition of two oil/water and sediment traps to ensure that storm water runoff from the parking lot and the rest of the project does not adversely affect water quality in the surrounding harbor. Review by Coastal Commission Water Quality staff have determined that sediment and grease traps alone are not adequate to protect harbor waters from hydrocarbons and other pollutants that may collect on the parking lot surface and be washed into the drainage system or detergents that may be used for washing down boats (even where signage prohibits their use). Therefore, the permit has been conditioned to require additional end of pipe filtration units. A less costly way to ensure adequate water quality protection would be to install a CDS unit into the proposed sediment and grease traps, which at a fraction of the cost would remove or filter the hydrocarbons and detergents from surface water runoff prior to discharge into the harbor; if such units were included in the project and shown on the final plans, the condition for end-of-pipe filtration units could be deleted.

As new and diverse operations may be conducted in the North Harbor area and on the wharf that may result in potential unforeseen future adverse water quality impacts, the permittee will be required to develop and implement a long-term pollution prevention program and provide water quality protection training to all persons involved in construction and future use of the area. The plan should indicate that polluted runoff should not be allowed to enter harbor waters, specific BMPs to be used by restaurant and commercial operations staff to prevent oil and grease or other pollutants from entering the harbor waters, trash control, and typical maintenance activities that can be undertaken to prevent pollution in and around the site.

Finally, the project has been conditioned to require review and approval from other resource protection agencies, including the Regional Water Quality Control Board (RWQCB), which has primary responsibility over water quality protection; the Monterey Bay National Marine Sanctuary, which has review authority over discharges to the Sanctuary; the California Department of Fish and Game, responsible for protecting marine mammals, and seabirds in the area; Monterey County Department of Environmental Health, responsible for ensuring safety with regards to transport of hazardous materials; and the Monterey Bay Unified Air Pollution Prevention Control, which regulates activities that may effect air quality.

Therefore, based on the findings above the project has thus been designed and conditioned to protect water quality and marine resources in Moss Landing Harbor, and so is in conformance with Sections 30230 through 30233 of the Coastal Act.

3. Public Access and Recreation

a. Issue

The project includes new and expanded public access improvements including a new, four-lane boat launch facility (concrete boat ramp with three floating docks), public wharf with seating and pedestrian promenade, transient boat docks, and a shoreline access trail that will extend across the public wharf. These public access improvements are intended to improve and increase the recreational boating and visitor-serving uses available at this location adjacent to the Moss Landing Harbor.

The project also includes other public access elements outside of the Commission's jurisdiction, and approved by the County, which include improvements to the existing parking area (grading, paving, and drainage), a shoreline access trail along the top of the shoreline bluff edge (which will connect with the trail located on the wharf), improvements along Highway One reducing the number of entrances from 3 to one, widening of the main entrance, and acceleration and deceleration lanes for improved ingress/egress, and a bicycle trail within the Highway One right-of-way.

However, as currently designed, the project proposes to place 1,900 cy of riprap along the shoreline, which will cover approximately ¾ acre of intertidal sand and mud flats, which are currently available for public recreational use.

b. Relevant Regulatory Policies

Coastal Act Section 30604(c) requires that every coastal development permit issued for any development between the nearest public road and the sea includes a specific finding that the development is in conformance with the public access and recreation policies of Chapter 3 of the Coastal Act.

Coastal Act Sections 30210 through 30213, 30220 and 30224 specifically protect public access and recreation. In particular:

> ***30210****: In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*
>
> ***Section 30213:*** *Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred. ...*
>
> ***Section 30220.*** *Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.*
>
> ***Section 30224.*** *Increased recreational boating use of coastal waters shall be encouraged, in accordance with this division, by developing dry storage areas, increasing public launching facilities, providing additional berthing space in existing harbors, limiting non-water-dependent*

land uses that congest access corridors and preclude boating support facilities, providing harbors of refuge, and by providing for new boating facilities in natural harbors, new protected water areas, and in areas dredged from dry land.

Additional Coastal Act policies that provide for maximizing public access and recreational opportunities include Section 30251 regarding the protection of scenic views (see Visual Resources finding below) and those policies in Section 30234 addressing recreational boating access (see Land Use finding above).

c. Analysis of Public Access and Recreation

Moss Landing Harbor provides public access and recreational opportunities of regional and statewide significance. Boat launching and guest dock space supports recreational boating use of the area, as does existing berthing facilities, kayak rental companies, and guided boat tours of the Elkhorn Slough and Monterey Bay, all available at the Moss Landing Harbor. Fishing, harbor-side dining, nature observation and similar pursuits are also available at the harbor, while beachcombing, shopping and camping are available at adjacent areas, including Moss Landing State Beach which is located on the west side of the North Harbor area.

The proposed project will strongly benefit public access and recreation in the North Harbor area, by: 1) installing a new four-lane boat ramp to be dedicated for motorized boats and sailboats; 2) constructing the south transient guest dock, designed for deeper draft vessels to tie to; 3) constructing the north transient guest docks for short-term guest use; 4) demolishing existing degraded, waterfront buildings that limit shoreline access and have become public safety hazards because of their degraded condition, and County-approved landward relocation of building pads for future rebuild of the structures - restaurant and interpretive center/commercial building/harbor district office building – which will allow for 5) construction of a public pedestrian wharf along the shoreline; 6) developing a coastal trail across the wharf; and other access improvements approved by the county, as described above.

Improved Recreational Boating Facilities and Public Parking

As previously described, the proposed new four-lane ramp will be dedicated for motorized vessels on trailers including sport fishing and recreational boats. This will allow the existing boat ramp to be dedicated to non-motorized vessels, such as kayaks and canoes. Dedication of the two boat ramps in this manner will serve to reduce user conflicts and improve public safety for those recreationalists using the ramps.

Construction of transient guest docks along the north and southern shoreline will also provide expanded opportunities for recreational boaters to make use of the North Harbor area. Moss Landing Harbor serves as a Harbor of Refuge, and must often accommodate traveling boaters seeking temporary dock space or refuge during stormy conditions out at sea. Additionally, guest docks in the North Harbor area will provide greater access to the visitor-serving commercial activities located in the area, including the restaurants, for visiting boaters. Related activities may include charter boat and sport fishing, and guided tours of the area that would load and unload from the north and south transient docks.

Furthermore, additional, albeit, transient berthing space in the North Harbor area will serve to avoid conflicts with the need for dock space in the South Harbor, where commercial fishing use has priority over recreational boating use.

To ensure that the new boat ramp and guest docks remain available to serve the general public, the permit has been conditioned to require that boat ramp and guest dock use shall be available for general public use and recreational boating, as well as to commercial marine charter, sport fishing, research or university use on a first-come, first-served basis.

Additionally, in order to ensure that boat ramp and guest dock use is provided commensurate with similar features located at other harbors in the Central Coast area, this permit has been conditioned to provide a final fee schedule for Executive Director review and approval that identifies the fee structure for short-term, day use, or any approved extended use of these facilities. Such fees should be commensurate with existing Harbor district fees or fee ordinance, and should detail the methodology for future rate increases.

Improved parking facilities, outside of Coastal Commission jurisdiction, and already approved by the County, include paving the existing parking lot, with striping that provides for a "stacking lane," - a lane for those with boats on trailers to wait in line to use the boat ramp off of the Highway, and generally out of the way of other users. Parking spaces will also be striped in a way that will allow autos with trailers to park in an organized and space efficient manner, further improving the area in support of recreational boating use. While these improvements are outside of the coastal Commission jurisdiction, they serve to further support the coastal dependent use of the site for recreational boating and coastal access.

Shoreline Access

The project includes a public pedestrian wharf and coastal trail that extends across the wharf (and along the shoreline in the County's jurisdiction). As described above, the project also involves the demolition of existing, degraded, waterfront buildings that limit shoreline access, construction of a public pedestrian wharf along the shoreline, and installation new riprap to be placed along the shoreline between the new wharf, around the new boat launch facility and to the south side of the existing boat ramp, and replacement riprap under the new wharf.

Demolition of Existing Structures.

Portions of the existing structures, including much of the abandoned Maloney's Harbor Inn Restaurant, are located on pilings and extend out over the harbor waters, and so within the Coastal Commission's original jurisdiction. Demolition of these structures is being proposed in order to allow for construction of the public wharf seaward of the relocated building pads (with future reconstruction of the restaurant and interpretive center/commercial building/harbor district offices requiring a separate County permit). The demolition and relocation of these structures, and construction of the public wharf will improve the recreational opportunities available to the general public along the North Harbor shoreline, by adding more pedestrian waterfront access and observation areas for enjoying the ocean and harbor views the area provides.

While the Maloney's Harbor Inn Restaurant has been identified by the County as an historic structure, the current condition of the structure is so deteriorated as to make it infeasible for remodel or repair. Coastal Commission staff reviewed reports and correspondence regarding structural evaluations performed for the Maloney's Harbor Inn Restaurant. Correspondence from G.A. Graebe and Associates (G&A), the civil and structural engineering firm that conducted the structural evaluations (dated November 26, 2002; see Exhibit N), states that "a recent storm, long term wave action, erosion, rot and age have combined to render Maloney's Restaurant unsafe for occupancy. The restaurant is considered a 'dangerous building'…is old and cannot be repaired economically …[and] should be removed in the near future." Photos included in that letter report showed settlement of the foundation and walls, distressed, rotten and missing floor framing supports, tidal scour and erosion around newer supports, and settlement of the newest floor supports (2 year old concrete filled 50-gallon drums supporting existing pilings) due to tidal scour and wave erosion. Correspondence sent January 22, 2003 states that the restaurant had been "further damaged by two recent storms, and is in imminent danger of failing. There has been increased erosion of supports and additional building settlement…[and the building] should be removed immediately." Additional correspondence from G&A (also dated January 22, 2003) following an evaluation of the other two buildings and pier located south and adjacent to Maloney's Restaurant stated that these structures were also "in bad structural condition" and recommended immediate removal. The pier was found to be in "various stages of collapse," one building was found to have rotten piles and portions of the building were floating in the water, the other building was "undermined with a sagging floor and partially rotten foundations…[with] a portion of the building rest[ing] on a concret[e] slab foundation which is cracked."

The County's final local action approving the demolition and relocation of the Harbor Inn Restaurant (PLN020485; Commission CDP 3-MCO-04-094) describes the historic resource evaluation conducted on the structure by the Moss Landing Area Historic Resources Review Board:

> *Finding 1, Evidence(l)- Historic Resources Review Board (HRRB). Demolition of the Maloney's Harbor Inn was presented to the HRRB on May 1, 2003. Maloney's Harbor Inn was constructed in 1921 and is the oldest continuously operating restaurant as well as the oldest continuously operating business in Moss Landing. It is tied historically to the era of sardine fisheries in Monterey Bay. Monterrey County's Department of Parks and Recreation Primary Record of the Harbor Inn noted the significance of the building as a social center of Moss Landing, dating back to the 1930's. The California Department of State Parks and Recreation describes Maloney's Harbor Inn as "…eligible for listing on the California Register of Historical Resources, under criterion 1, and possibly the National Register of Historic Places, under Criterion A." The HRRB unanimously voted for the Harbor district to include a historical assessment in the environmental document. HRRB staff was directed to provide recommended mitigation measures. Although the existing structure cannot be moved or rehabilitated, the desire is to retain as much of the heritage established with this building as possible.*

The County staff report for the Planning Commission hearing also indicates that:

> *… an evaluation of the condition of the Harbor Inn building…determined that the structure*

could not be salvaged, relocated, and/or rehabilitated. Therefore the North Harbor shoreline Protection Project EA/IS/MND, which previously discussed the relocation of Maloney's, was amended to address the potential historic significance of demolishing the Maloney's Harbor Inn… The environmental analysis determine[d] that removal of this historic building and the impact to the historical significance of the structure will be mitigated to a less than significant level by incorporating the architectural features of the old building into the new restaurant and by placing a commemorative plaque on the new restaurant or new wharf that notes the historical significance of the Harbor Inn.

Thus, as detailed in the County's Condition 16, mitigation measures incorporated as part of the project by approval of the Mitigated Negative Declaration adopted for the project, state that

Condition 16, Mitigation measure .t. A plaque will be erected on or adjacent to the new structure that will include a description (written and/or sketch) of the original structure and describe the historical significance of the Harbor Inn.

Condition 16, Mitigation measure u. The new structure will be of similar architectural style to the original building and other buildings within the Moss Landing Harbor. In other words, the architecture shall be consistent with existing design and material features within the harbor complex (e.g., consistent with a commercial working harbor). The orientation to the water will be maintained and the building will continue to be used to house a restaurant.

With the incorporation of these mitigation measures into the County's permit, the project is consistent with Coastal Act policies and the LCP in protecting the historic maritime character of the area. Commission staff will continue to coordinate with the County in the review of any future reconstruction permits to ensure that future development of the site will be consistent with these requirements.

Additionally, activities associated with the demolition of the existing structures have the potential to impact environmentally sensitive habitat and water quality of the Harbor, Elkhorn Slough and the Monterey Bay National Marine Sanctuary. Therefore the permit has been conditioned to protect sensitive habitat areas by complying with County conditions of approval, which include implementing mitigation measures a through u of County Permit Condition 16 (see Exhibit K), as well as Special Condition 5 of this permit which requires implementation of an approved construction operations plan, designed to ensure that construction activities avoid or minimize impacts to adjacent habitats, recreation areas and water quality.

Public Wharf

The 15,000 square foot wharf will be 375 ft in length and vary from 24 ft. to 40 ft. in width, providing for a public promenade along the shoreline seaward of the relocated structures. The wharf would extend from the gangway for the north transient guest dock, approximately 185 feet south of the proposed boat launch, south nearly to the Highway One Bridge, and would provide fully accessible public pedestrian access throughout this area. The new wharf will be built to incorporate the public wharf area already constructed seaward of the Sea Harvest (formerly Skipper's) Restaurant. Construction of the new

wharf proposes using a maximum of 175 concrete or steel pilings (16 inch square). Wharf decking will be constructed of either wood or concrete and will be supported by a concrete, steel or wood sub-structure that will connect to the piles. The wharf will be supported by the pilings, and attach to the shore at four points, the north transient guest dock gangway, the north and south side of the Sea Harvest Restaurant, the south transient guest dock gangway. The wharf is designed to extend approximately 13 to 44 ft. from the line of high water (highest tide of the year as defined by the Army Corps of Engineers), and will provide ADA accessible access to the transient guest docks. As shown on plans, the seaward side of the wharf has been designated for coastal trail access.

Because the wharf as designed, will be constructed in close proximity to the relocated restaurants and interpretive center/commercial building, which may wish to use some of the wharf deck space to provide outdoor seating or conduct special events, this permit has been conditioned to ensure that such activities occupy no more than half the width of the wharf deck space and not interfere with lateral access along the seaward edge of the wharf, so that through public access remains available to the general pubic at all times.

Additionally, as the new wharf, boat ramp, and transient guest docks will extend into navigable waters, they have the potential to impact navigation in the North Harbor area and so need to be clearly marked, lit and identified on navigational charts. Staff from the National Oceanic and Atmospheric Administration's Office of Coast Surveys has indicated that such changes require an update of the coast and ocean charts that include this area. Therefore, the permit has been conditioned to comply with NOAA requirements for updating the charts to account for the extent and location of the new boat ramp, wharf and transient boat docks. Additionally, as the new boat ramp, wharf and guest docks will need to provide adequate lighting and markings to ensure navigational safety in open coastal waters, the project has been conditioned to require approval by the U.S. Coast Guard.

RipRap Shoreline Protection

As described above, the proposed project includes the placement of approximately 1,900 cy of riprap revetment along approximately 1,000 linear feet of shoreline, which will cover nearly 0.75 acres of intertidal area. About twenty percent of this area, approximately 0.15 acres (between Sea Harvest and Maloney's restaurants), is already covered by riprap, and the project merely proposes replaced existing riprap in this area, which will be located underneath the public wharf, and so will not interfere with public access in this area. Since much of the shoreline south of the new boat ramp will include revetment under the wharf, and revetment to protect the boat launch, it is reasonable to extend the revetment between the wharf and the boat ramp, especially since the wharf provides an attractive alternative to shoreline access in this area. However, the shoreline north of the proposed boat ramp is more amenable to intertidal access, especially near the existing boat ramp, thus shoreline protection along this shoreline should be designed in a manner that minimizes riprap and maximizes access to the intertidal area.

As currently designed, the riprap revetment proposed north of the public wharf, will occupy 0.60 acres of shoreline area, and as shown in cross sections D and G in Exhibit F, would extend approximately 20

to 28 feet from the edge of the blufftop, covering much of the intertidal zone in this area, and making it difficult for the public to reach the sand and mudflats that currently exist along the harbor shore. The current shoreline configuration is such that the public can walk along the toe of the bluff, especially south of the existing ramp, where a large intertidal sand bar is located. Locals and visitors alike commonly use this sandbar area to play ball with their dogs, get their feet wet, or to pull up their kayaks, etc. Additionally, with removal of the tidal steps from the site plans (which were previously proposed to be located immediately south of the existing boat ramp), access to the intertidal sand flat south of the boat ramp will be made more difficult by the proposed project.

The sheetpile bulkhead and tidal steps proposed in the earlier version of the project is a feasible design that has been found to be less environmentally damaging than riprap revetment, and actually accomplishes public access objectives better, and with fewer impacts (footprint, habitat, visual) than what is currently proposed. Therefore, the project has been conditioned to modify the site plans to include a sheetpile bulkhead north of the proposed boat launch, with the minimum toe protection necessary, and to include a stairway or tidal steps with railings to provide for access from the bluff edge to the sandbar south of the existing boat ramp.

Coastal Trail

Two public access elements of the project, already approved by the County, include a 10-foot wide, Class I bicycle trail[6] located along the eastern side of the property, within the Highway One right-of-way, and designation of a ten-foot wide pedestrian coastal trail to be located at the outboard edge of the bluff along the shoreline, extending from Highway One at the north end of the site, to the north end of the pedestrian wharf. Within the Commission's jurisdiction, the pedestrian coastal trail would continue southward along the seaward edge of the public wharf (a distance of approximately 375 feet), to the southernmost wharf access point near the Highway One Bridge.

[6] A Class One bicycle trail would utilize a separated right-of-way designated for the exclusive use of bicycles and pedestrians.

Combined in this manner, the pedestrian coastal trail will extend for approximately 2,000 linear feet, will allow for through coastal access along the shoreline and out over harbor waters, all the way through the project site, linking with the bicycle trail access along Highway One, as well as with the lateral access easement provided on the adjacent Elkhorn Yacht Club parcel.

In the Coastal Commission's recent periodic review of Monterrey County LCP, staff made recommendations regarding implementation of the California Coastal Trail, and preferred coastal trail alignment through this area, which included locating the CCT along the shoreline of Harbor District property and connecting trail segments proposed on adjoining parcels to allow continued through coastal access. Other Periodic Review recommendations include implementing a multi-use trail (which would allow both bicycle and pedestrian use) separated from the roadway between Jetty Road and the Highway One Bridge, and formalizing this route as a segment of the Monterey Bay Sanctuary Scenic Trail (MBSST), which itself is a component of the multi-strand California Coastal Trail system. The North County LUP shows the Bicentennial Bicycle Route in the North Harbor area along Highway One.

Provision of a coastal access trail along the pedestrian wharf, along with the approved segments of trail, will serve to implement these recommendations. However, to ensure that through pedestrian access is provided between the wharf and the bicycle route, the permit has been conditioned to require the design and implementation of a trail connection (stairway or ramp) at the southern end of the project site (between the southeastern end of the wharf and the Highway One Bridge). Measures to prevent bicyclists from entering the pedestrian wharf promenade (such as stairs or bollards) may be incorporated into the design, but should not prohibit pedestrian access. By connecting the pedestrian and bicycle trails in this manner, the project would provide continuous lateral access along the harbor shoreline and maximize the public access opportunities available at this site. Thus as conditioned, the coastal trail element of the project would implement the construction and designation of coastal trail segments that provide continuous lateral coastal access and maximize public access consistent with Coastal Act Section 30210.

Construction Activities

Some impacts to public access during construction are possible as well, but are expected to be of limited duration. To minimize such impacts, this permit requires that construction and demolition operations are limited to weekdays, between the hours of 7am to 4pm in order to avoid conflicts with continued public use of the site on weekends, and that construction activities be phased along portions of the shoreline to minimize the amount of shoreline closed during each phase of the project (e.g., phasing emplacement of riprap revetment, wharf construction, boat ramp construction, and sheetpile installation so that at least two thirds of shoreline remains open for public use).

d. Public Access Conclusion

As proposed and conditioned by this permit, the project provides and enhances priority coastal dependent uses, which include recreational and commercial boating, fishing, and public access opportunities consistent with Coastal Act Sections 30210, 30213, 30220, 30224. Therefore, as conditioned to ensure that commercial use of the site retains public access opportunities on the wharf

and guest dock space, and that through coastal access is provided throughout the project site, the proposed project will maximize public access, by providing new recreational boating facilities and public accessways, consistent with the public access and recreation policies of the Coastal Act.

4. Visual Resources

a. Issue

The project involves demolition of existing structures, and construction of new structures (including public wharf, new transient guest docks, and riprap shoreline revetment) that may substantially change visual aspects of the North Harbor project area.

b. Relevant Regulatory Policies

Coastal Act Section 30251 requires that:

> ***Section 30251.*** *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

Additionally, Coastal Act Section 30253(5) states that:

> ***Section 30253(5).*** *Where appropriate, protect special communities and neighborhoods, which, because of their unique characteristics, are popular visitor destination points for recreational uses.*

c. Analysis of Visual Resources

Moss Landing Harbor is located on the scenic shoreline of Monterey Bay, behind sandy peninsulas (sand spits) on both sides of the harbor entrance. The northern spit includes the low-lying dunes within Moss Landing State Beach. The southern spit is densely developed with commercial fishing facilities, boatyards, marine research support facilities, a fish market and restaurant, tavern, warehouses, and a few residential structures. On the east side of Highway One are the massive industrial buildings of the Duke Energy power plant and other industrial structures. The visual resource that appears to attract the most public attention in the Moss Landing Harbor area is the developed "harborscape" itself, with its great variety of pilings, piers, docks, weathered wooden buildings, and its many different vessels of all descriptions.

The entire project area lies seaward of Highway One. From the point where it bridges the entrance to Elkhorn Slough, Highway One provides an excellent vantage point into both the north and south arms of the harbor—as well as a quick view of the open waters of Monterey Bay through the harbor entrance channel. In addition to public views from the highway, scenic harbor vistas are enjoyed from water level by a substantial number of recreational visitors. This user group would include visitors at the State beaches, those onboard Elkhorn Slough and Monterey Bay tour boats, sailboats, power boats, kayaks and other recreational boaters using the harbor waterway.

The Coastal Act provides Moss Landing Harbor special protection, because its unique characteristics make it a popular visitor destination point for recreational uses. Moss Landing Harbor is one of only six coastal harbors located along the Central Coast. It is uniquely sited between the Elkhorn Slough tidal wetland complex and the Pacific Ocean. Its history as a whaling and commercial fishing area has influenced the design and construction of many of the mostly functional or utilitarian structures around the Harbor, and the area retains its working harbor character, with easy access to deep waters of the Monterey Bay, desirable for both commercial and recreational boating.

The project will affect public views in three ways: 1) it will add additional structures into the viewshed visible from Highway One and the Highway One Bridge over Elkhorn Slough (including a new wharf, floating docks, and large paved parking lot; 2) it will remove existing deteriorated and damaged structures from the viewshed; and 3) potential future rebuild of the relocated structures in the County's jurisdiction will be located within the viewshed[7]. However, none of these would result in a significant impairment of public visual resources within the scope of the Coastal Commission's permit. Other project elements (e.g., coastal trail, boat ramp, tidal steps, shoreline protection structures) will be located at or below ground level and will not be visible or block views of the harbor, dunes or ocean from Highway One.

The project serves to expand on the recreational boating aspect of the harbor, and serves to add more wharf and dock space in the harbor, designed consistent with similar structures already located within close proximity of the project (e.g., existing docks located adjacent to the Elkhorn Yacht Club, boat ramp just south of the EYC and existing wharf seaward of the Sea Harvest Restaurant). The new wharf, boat launch and transient guest docks will most likely to add to the "harborscape" and will be consistent with the maritime character of the area. The hand railing for the wharf, shown in Exhibit F, will be identical to that currently located along the wharf segment constructed seaward of the Sea Harvest Restaurant, with 2" x 2" wire mesh that provides views through the panels between railing supports.

Additionally, since the project has been required to incorporate the sheetpile bulkhead and stairs or tidal steps into the project design, the resulting shoreline will not be fully occupied by riprap revetment, and so will be more aesthetically pleasing, and both more physically and visually approachable than that currently proposed. Since design modifications are required, this permit has also been conditioned to require final site plans, structural plans, lighting plans, signage plans and landscaping plans for those

[7] Other project elements will be located at or below ground level (eg., coastal trail, boat ramp, tidal steps, shoreline protection structures) and will not be visible or block views of the harbor, dunes or ocean from Highway One.

portions of the project in the Coastal Commission's jurisdiction to ensure that the project is constructed consistent with Coastal Act policies that protect visual resources and community character.

For development undertaken in the County's jurisdiction, the parking lot has been designed to incorporate landscaping to soften the look of the area with scattered planting islands that incorporate trees, shrub mass and groundcover. The County's staff report indicates that while several existing Monterey cypress trees will be removed, the landscape plan has incorporated a number of new trees will be installed throughout the project/parking lot area. The County's action approving the parking lot requires a landscaping plan that incorporates xeriscape principles, including use of drought tolerant, native plants and low water-use irrigation methods.

Since the project approved by the County includes raising the base elevation of the building pads and parking lot approximately five feet, to elevate the site above the 100-year flood zone, the rebuilt structures will extend at least five feet further into the viewshed than currently designed. However, the County's relocation approval also conditioned the project to ensure that future development will be of similar architectural style consistent with the existing character of an existing working harbor, and so serves to protect the visual resources and historic maritime character of the area. Furthermore, any future redevelopment of the demolished buildings will require a separate coastal development permit, with Commission review and appeal jurisdiction. With these factors, it is expected that future rebuild of the site will not significantly alter public views of the Harbor, shoreline and ocean beyond.

Therefore, as conditioned by this permit, which incorporates mitigation measures required by the County's approval of landward portions of the project, the proposed project will not significantly alter scenic public views and will preserve the maritime character of the area in the North Moss Landing Harbor, the Commission finds that this project is consistent with Section 30251 and 30253(5) of the Coastal Act.

5. LCP Planning Process

The Moss Landing Harbor lies within the North County segment of the Monterey County Local Coastal Program (LCP). The LCP includes the North County Land Use Plan (LUP), which incorporates the Moss Landing Community Plan, and the Coastal Implementation Plan sections that apply to this area. This permit covers only those portions of the project within the Commission's original jurisdiction, i.e., the wharf/seating area, south transient dock, north transient docks, new boat ramp/launch, tidal steps, and proposed shoreline protection (sheetpile seawall, and rip-rap revetment), and coastal trail (much of which is supported by the shoreline protection and wharf structure, and which links to other areas already permitted and conditioned by previous Coastal Commission actions[8]), as well as with dredging, fill and piling emplacement necessary to construct these project components.

Within the Commission's original jurisdiction, the policies of the Coastal Act, rather than the LCP, are the standard of review for development projects. Nonetheless, the LCP remains useful in an advisory

[8] CDP 3-98-069 for the Elkhorn Yacht Club, and CDP 3-99-049 for rebuild of Skipper's –now Sea Harvest – Restaurant site.

capacity, to provide appropriate context for land use decisions, and to provide consistency between original and delegated areas of coastal zone jurisdiction.

The existing LCP was certified following completion of the Coastal Implementation Plan on January 12, 1988. The North County LUP has not been updated since it was originally certified on June 3, 1982. Since that time, a number of changes have occurred in the vicinity of the Moss Landing Harbor, including reconstruction of the Highway One Bridge over Elkhorn Slough, development of the Monterey Bay Aquarium Research Institute facilities, relocation of Moss Landing Marine Lab facilities, approval of a 2-lane replacement bridge at the south end of the harbor, the new RV Park on Sandholdt Road, the new Cannery Building and K-Dock upgrade, Skipper's Rebuild, North Harbor Rehandling facility restoration and other development and redevelopment projects. The Moss Landing Harbor District has also developed or is in the process of developing district lands in the area, including proposed expanded boat storage facilities southwest of Sandholdt Road Bridge, and potential recreational use of the north Harbor restoration area. Currently Monterey County is conducting an update of the County's General Plan and LCP, which will also hopefully include an update of the Moss Landing Community section, to account for all of the land use changes that have occurred to date.

A review of the existing applicable policies does not reveal any conflicts between the proposed project and the LCP. The LCP policies reflect Coastal Act protection of coastal dependent commercial and recreational boating, recommended development and expansion of such facilities, and allows dredging to maintain navigational channels, create and expand new recreational boating facilities and public recreational opportunities, such as is provided by the project proposed herein. The LCP recognizes the problem of erosion and sedimentation and the need for best management practices as part of project activities.

Therefore, the proposed project, as conditioned, does conform to Chapter 3 of the California Coastal Act and will not prejudice the ability of the local government to implement a Local Coastal Program that conforms to Chapter 3 of the Coastal Act.

6. California Environmental Quality Act (CEQA)

Section 13096 of the California Code of Regulations requires that a specific finding be made in conjunction with coastal development permit applications showing the application to be consistent with any applicable requirements of CEQA. Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effects which the activity may have on the environment. Beyond this, the Secretary of Resources has certified the Coastal Commission's review and analysis of land use proposals as being the functional equivalent of environmental review under CEQA.

In the course of application review, several potential environmental impacts were identified and are discussed in this staff report, which is incorporated in this finding. These include, but are not limited to, potential water quality impacts from project demolition and construction activities, as well as continued future use of the new public recreational facilities, and dredge activities necessary for the boat ramp and

new north transient docks. The dredge episode protocols, required pursuant to the long-term dredging permit currently in force, require sediment testing and suitability determinations prior to dredging, and allow only for uncontaminated sediments to be dredged, and thus serve to substantially lessen any adverse effects the dredging activities may have on the environment. Additionally, potential impacts to marine resources and environmentally sensitive habitat areas (harbor waters, eelgrass beds and clam beds, and tidal mudflats) have also been identified, and appropriate measures have been incorporated into the project by approval of the mitigated negative declaration, to avoid or mitigate such impacts, and are incorporated in the conditions attached to this permit. Accordingly, the Commission finds that only as conditioned by this permit will the proposed project not have any significant adverse effects on the environment within the meaning of CEQA.

4. References

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List of Exhibits

Exhibit A. Regional Location Map, Moss Landing Harbor

Exhibit B: Project Vicinity Map, Moss Landing Harbor

Exhibit D: June 2001 Aerial Photo of Moss Landing Harbor

Exhibit E: Map of Proposed Dredging Areas, Moss Landing Harbor

Exhibit D. Pipeline Placement for South Harbor Beach Replenishment Site, Moss Landing Harbor

Exhibit E: Dredging Volume Record for Moss Landing Harbor 1996-2000

Exhibit F: Summary of Sediment Testing Results for Moss Landing Harbor

Exhibit G: Freshwater Sediment Screening Assessment for Moss Landing Power Plant Intakes for Dredging 2002

Exhibit H: Proposed Sediment Testing Methods for Moss Landing Harbor Dredge Areas

Exhibit I: Proposed Analysis Methods, Reporting Limits and Acceptable Range for Sediment Characterization of the Moss Landing Federal Channel.

Exhibit J. Pipeline Placement for South Harbor Beach Replenishment Site, Moss Landing Harbor

Exhibit K. Excerpts from Regional Water Quality Control Board (RWQCB) Waste Discharge Requirements (WDR) Order No. 01-007.

Exhibit L: RWQCB Monitoring and Reporting Program (MRP) Order No. 01-007